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THE WASPS AND BEES (HYMENOPTERA: ACULEATA) OF BLAXTON COMMON-2 IN WATSONIAN YORKSHIRE

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During 2004, a return visit was made to Blaxton Common to repeat a previous study (Archer, 1995). The open areas were found to be completely shaded by woodland growth with a loss of aculeate wasps and bees, so that a repeat study was not possible. A near-by open site, within the Blaxton Common complex, was soon found and it was decided to study this site and call it Blaxton Common-2. Blaxton Common-2 has been found to be a very good site for aculeate wasps and bees, with 84 recorded species, including seven species of national importance. Blaxton Common-2, like Blaxton Common, has an area of c. 150 ha and is situated to the north-east of Blaxton near Doncaster (SE6801, VC63). The region has sandy acid soils worked by the sand extraction industry which has been abandoned at the current site, probably more recently than Blaxton Common. The open site consists of large level areas with sandy cliffs and depressions which are used by the subterranean nesters as nesting sites. The site also consists of sandy pits filled with water and blocks of birch and oak woodland. The open areas have regenerating vegetation including gorse and heather.

The aims of this paper are to describe and analyse the aculeate wasp and bee fauna of Blaxton Common-2, to extend the analysis of the Archer Blaxton Common data, and to compare the two sites.

SAMPLING METHODS

Between 2004 and 2006, 16 visits were made to Blaxton Common-2 throughout the year as follows: April (2 visit), May (3), June (3), July (3), August (3) and September (2). During each c. 3-hour visit, all species of aculeate wasps and bees were recorded and usually collected with a hand net for identification. Recording was mainly from open areas.

In the following account, the nomenclature can be related to that of Kloet and Hincks (1978). An up-to-date checklist can be found on the Bees, Wasps and Ants Recording Society (BWARS) web pages at <http://www.bwars.com/>.

SPECIES PRESENT AND SEASONAL PROGRESSION OF SPECIES

A full list of the species recorded is given in the Appendix. At the family level, Table 1 shows the taxonomic distribution of species and records. A record represents a specimen differing in one of the following three variables: name, sex, and day of visit. The solitary wasp family, Crabronidae, and the solitary bee subfamilies, Andreninae, Halictinae and Anthophorinae, are the dominant family and subfamilies in terms of number of species and records.

The best months for recording solitary wasp species were June, July and August, with June the most productive month for first recording (Table 2). The species most evident were the hunters of caterpillars (*Ammophila sabulosa*), of flies (*Oxybelus uniglumis*, *Crossocerus quadrimaculatus* and *Mellinus arvensis*), of weevils (*Cerceris arenaria*), of homopteran bugs (*Mimesa lutaria*), of honeybees (*Philanthus triangulum*) and of spiders (*Anoplius infuscatus*, *Epeorus rufipes*). All these species are subterranean nesters.

The best months for recording solitary bees were April, May and June, although many species were also taken during July, August and September. April and May were the best months for the first recording of solitary bee species (Table 2). The species most evident again are all subterranean nesters or cleptoparasites of subterranean nesters: *Andrena minutula*, *A. nigroaenea* with *Nomada goedeniana*, *Andrena subopaca*, *A. barbilabris* with *Sphecodes pellucidus*, *Lasioglossum villosulum*, *L. leucozonium* and *Sphecodes ephippius*.

The numbers of solitary species, on average, recorded per month were: April, 13.0

(range 10-16), May, 12.3 (11-14), June, 20.3 (16-24), July, 15.3 (14-16), August, 12.0 (8-16) and September, 9.5 (8-11).

SPECIES QUALITY

According to Shirt (1987), the following Red Data Book species have been recorded: *Diodontus insidiosus*, *Philanthus triangulum*, *Andrena tibialis*, *Sphecodes reticulatus*, *Nomada fulvicornis* and *N. lathburiana*. Falk (1991) suggested that two of these species, *Andrena tibialis* and *S. reticulatus*, should be downgraded to national scarce status (Na) and that *Sphecodes crassus* should be given national scarce status (Nb).

TABLE 1. Number of species and records of aculeate wasps and bees recorded from Blaxton Common-2.

Taxa	No. Species	No. Records
Solitary wasp species		
Chrysididae	1	1
Mutillidae	1	1
Pompilidae	7	23
Eumeninae	1	1
Sphecidae	1	14
Crabronidae	19	64
Total	30	104
Solitary bee species		
Colletinae	1	6
Andreninae	15	61
Halictinae	15	59
Megachilinae	1	1
Anthophorinae	10	30
Total	42	157
Total solitary wasp and bee species	72	261
Social wasp and bee species		
Vespinae	2	
Apinae	10	
Total	12	
Total wasp and bee species	84	

TABLE 2. Number of species and first records of species of solitary wasps and bees recorded from Blaxton Common-2.

	April	May	June	July	August	September
Solitary wasps						
First records	0	1	18	9	2	0
Recorded	0	1	18	19	13	5
Solitary bees						
First records	17	12	5	3	4	1
Recorded	17	21	19	12	10	11

Recent work carried out by the Bees, Wasps and Ants Recording Society indicates that three species (*Philanthus triangulum*, *Nomada lathburiana* and *Sphecodes reticulatus*) should lose their national status. To take account of these changes, Archer (1999, 2002) has developed a national quality scoring system of high and low quality scoring species. High quality species have a scarce (equivalent to Nb), rare (equivalent to Na) or very rare (equivalent to RDB) status while low quality species have a universal, widespread or restricted status. According to this national system, Blaxton Common-2 has seven scarce status species (*Chrysis viridula*, *Anoplus viaticus*, *Tachysphex nitidus*, *Diodontus insidiosus*, *Andrena tibialis*, *Sphecodes crassus*, *Nomada fulvicornis*). *Philanthus triangulum*, *Sphecodes reticulatus* and *Nomada lathburiana* have a widespread status.

By giving each of the 72 solitary wasp and bee species an Archer national status, a national quality score of 152 can be calculated (Table 3) with national species quality score (SQS) of 2.1 (152 divided by the 72 solitary species).

TABLE 3. The Archer quality scores of the species of solitary wasps and bees recorded from Blaxton Common-2.

Species	Species Status (A)	No. Species (B)	Quality Score (A x B)
Universal	1	34	34
Widespread	2	31	62
Scarce	8	7	56
Total		72	152

Species Quality Score (SQS) 152/72 = 2.1

ESTIMATING THE POTENTIAL NUMBER OF SOLITARY WASP AND BEE SPECIES

One of the problems in the study of any site is the difficulty of knowing how many more species are present at a site, but are, as yet, unrecorded. Recent advances in non-parametric statistical procedures offer a way of addressing this problem. Three procedures have been used to estimate the potential number of species on the site: (1) the presence/absence of Chao (in Colwell and Coddington, 1994) which is based on the number of species that are observed in one (unique species) or two (two occasion species) samples or visits, (2) the first order Jackknife (Heltshe & Forrester, 1983) which depends only on the unique species, and (3) the Bootstrap (Smith & van Belle, 1984) which depends on the proportion of samples containing each species. Because some aculeate species are only active in the spring or summer it is advisable that samples be taken throughout the months of adult activity. The software to carry out the statistical procedure was provided by Pisces Conservation Ltd.

The statistical procedures were run with the software, taking 1, 2, etc. samples at random 100 times for each procedure, each time calculating a mean estimate of species diversity. With a small number of samples the estimates vary, but as more samples are selected the estimates may stabilise giving confidence in them. In fact, the estimates do stabilise (Fig. 1) predicting that, on average, about 82-92 solitary species could be present on the site. The estimates, when all the samples are considered, are given in Table 4 with 95% confidence limits (meaning that there is a 95% chance that the potential number of species falls within this range). The close agreement of the three estimates gives confidence in these estimates. In conclusion, it is indicated that, on average, a further 10-20 could be further recorded. The social species are all common and widespread species.

CLEPTOPARASITIC LOAD

The cleptoparasitic load (CL) is the percentage of aculeate species that are cleptoparasitic (or parasitoids) on other host aculeates. Wcislo (1987) showed that parasite behaviour among aculeate Hymenoptera correlated with geographical latitude. Thus parasitic rates are

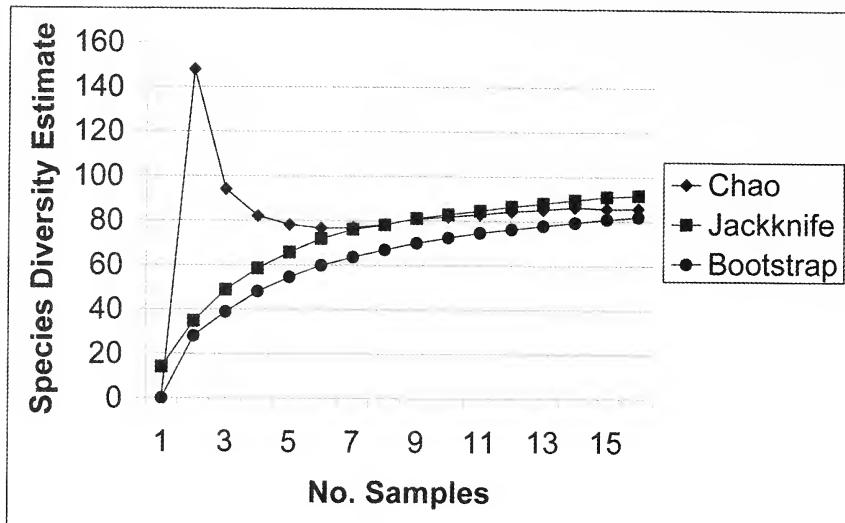


FIGURE 1. The Chao presence/absence, First Order Jackknife and Bootstrap estimates of species richness of solitary wasp and bee species from Blaxton Common-2.

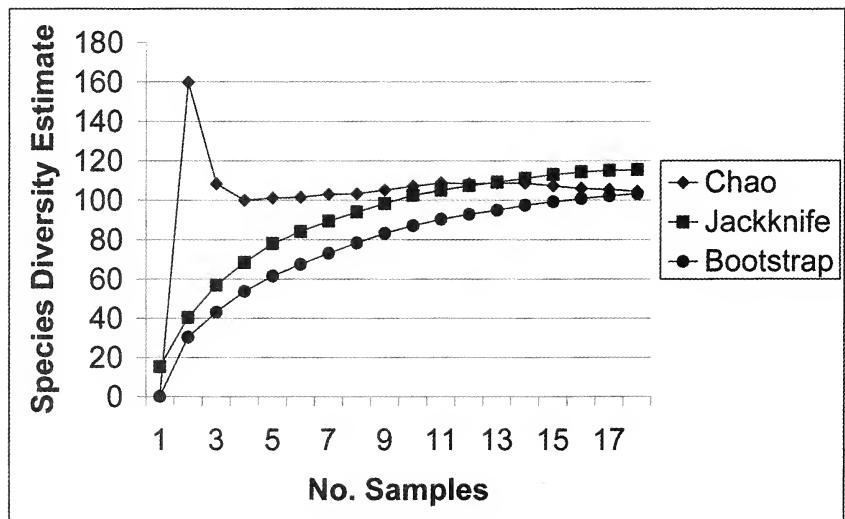


FIGURE 2. The Chao presence/absence, First Order Jackknife and Bootstrap estimates of species richness of solitary wasp and bee species from Blaxton Common.

TABLE 4. Non-parametric estimates of species richness of solitary wasps and bees from Blaxton Common-2 and Blaxton Common using the Presence/Absence Chao, Jackknife and Bootstrap procedures.

Blaxton Common-2	Chao	Jackknife	Bootstrap
Number of Species – Recorded	72	72	72
Number of Species – Estimated	86	92	82
95% confidence limits of estimates	72-100	82-101	–
% of species recorded	83.7	78.3	87.8
Blaxton Common			
Number of Species – Recorded	90	90	90
Number of Species – Estimated	105	116	103
95% confidence limits of estimates	91-118	103-118	–
% of species recorded	85.7	77.6	87.4

higher in temperate regions, as host populations are more synchronised in their life-history characteristics than in tropical regions. This finding probably does not hold for desert regions where the occurrence of rainfall would tend to synchronise life history characteristics. From a review of the literature, Weislo (1987) found that the CLs for bees varied between 16 and 33% (range 17%). The CLs from 27 Yorkshire sites vary between 25.0 and 40.0% (range 15%) (Archer, unpublished). The CLs from Blaxton Common-2 samples (Table 5) fall at the upper part of the Yorkshire range. This high value indicates that relatively more non-parasitic species could be found.

Weislo (1987) gave no CLs for solitary wasps, but from 27 Yorkshire sites CLs vary between 10.3 and 25.0% (range 14.7%). The CLs from Blaxton Common-2 fall within this range. All the social species are host species except for *Bombus bohemicus*, *B. sylvestris* and *B. vestalis* which are social parasites on other species of *Bombus*.

TABLE 5. Relative frequency of cleptoparasites (or parasitoids) species among the solitary wasp and bee species recorded from Blaxton Common-2.

	No. hosts (H)	No. cleptoparasites (C)	Cleptoparasitic load CL = 100 x C/(H+C)
Solitary wasps	26	4	13.3%
Solitary bees	17	25	40.5%

AERIAL NESTER FREQUENCY

The aerial-nester frequency (AF) is the percentage of aculeate species that have aerial nest sites. Aerial nesters use old beetle burrows in dead wood, central stem cavities (e.g. bramble), old snail shells, or crevices in cob walls, old mortar or exposed on the surface of rock or other hard material. Subterranean nesters nest in the soil, usually in burrows they dig, but sometimes holes and crevices are used after being altered.

The AFs for the solitary species are given in Table 6. The AFs for all the British species of solitary wasps is 46.2% and solitary bees is 17.9%. The AFs for the solitary wasp and bee species are very low. This observation just reflects that attention was mainly given to the open habitats.

Of the social species, the host species of *Bombus* are generally either subterranean nesters using small mammal burrows or nest at ground level under leaf litter and tussocky grass, although *B. pratorum* has been found nesting in aerial situations such as old birds' nests. The social wasps are usually subterranean nesters.

COMPARISON OF BLAXTON COMMON-2 WITH BLAXTON COMMON

Species comparison

More species (100) were recorded from Blaxton Common (Archer, 1995) than at Blaxton Common-2 (84). The two sites have 45 solitary species (38.5% of 117 species) in common, with 45 species only found on Blaxton Common and 27 only on Blaxton Common-2. The small number of solitary species in common came as a surprise as the two sites are close together, almost contiguous, of similar size and only one more visit was made to Blaxton Common. Three suggestions can be made to explain this finding.

Firstly, since the 1995 study, of the new species that have been recorded in Watsonian Yorkshire, six species (*Cerceris arenaria*, *C. rybyensis*, *Philanthus triangulum*, *Sphecodes ephippius*, *S. reticulatus*, *Nomada flava*) were found at Blaxton Common-2.

Secondly, the aerial nester frequencies for Blaxton Common (Archer, 1995) are much higher for the solitary wasps (33.3%) and bees (14.3%) than for Blaxton Common-2 (Table 6). Blaxton Common has 16 aerial nester species, with three dependent parasites, not found at Blaxton Common-2. There are differences in the habitats of the two sites. Blaxton Common consisted of narrow rectangular open areas separated and sheltered by scrubs and woodland while Blaxton Common-2 mainly consists of open unsheltered space. Probably the aerial nesters associated with the scrub-woodland areas were more likely to be found in the sheltered open areas of Blaxton Common.

Thirdly, the scarce status species are less likely to be found and might not be found during the visits. Of the 11 scarce species, four were only found at Blaxton Common (*Anoplus concinnus*, *Crossocerus palmipes*, *Diodontus tristis*, *Andrena varians*), five only at Blaxton Common-2 and two at both sites.

TABLE 6. Nesting habits of solitary wasp and bee species recorded from Blaxton Common-2.

	No. aerial nesters (A)	No. subterranean nesters (S)	Arial nester frequency AF = 100 x A/(A+S)
Solitary wasps	1	25	3.8%
Solitary bees	1	24	4.0%

Species Quality

The Blaxton Common data (Archer, 1995) can now be submitted to the Archer quality assessment. The 90 solitary species consist of 53 universal, 31 widespread and six scarce (*Anoplus concinnus*, *A. viaticus*, *Crossocerus palmipes*, *Diodontus tristis*, *Andrena tibialis*, *A. varians*) species. These statistics yield a quality score of 163 and a species quality score of 1.3. The quality score for Blaxton Common is larger than Blaxton Common-2 as a consequence of the greater number of solitary species found at the former. In contrast, the species quality score is smaller for Blaxton Common, mainly to a greater proportion of universal species (58.9%) – 47.2% Blaxton Common-2 – and a lesser proportion of widespread species (34.4%) – 43.1% Blaxton Common-2.

Species diversity estimates

Potential solitary species diversity estimates were not carried out on the Blaxton Common data (Archer, 1995). These procedures have now been carried out (Fig. 2) with the final estimates, when all the samples are considered, given in Table 4. The estimates stabilize with potential estimates of 103-116 solitary species indicating that 13-26 further solitary species could have been found.

CONCLUSIONS

Blaxton Common-2 is a very good site with 84 species of aculeate wasps and bees, with seven species of national importance. Blaxton Common (Archer, 1995) has more species

(100), with six species of national importance.

The conservation value of Blaxton Common-2 has a lower quality score than Blaxton Common due to the smaller number of species, but a higher species quality score due to a lower proportion of universal species.

Only 38.5% of the solitary species are found at both sites. Possible reasons for this large difference between sites could be due to the new Yorkshire species recorded from Blaxton Common-2, the higher number of aerial nesters at Blaxton Common, probably a consequence of habitat differences and a difference in scarce species recorded at each site.

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APPENDIX. List of species recorded from Blaxton Common-2.

CHRYSIDAE: *Chrysis viridula* Linn.

MUTILLIDAE: *Myrmosa atra* Panzer

POMPILIDAE: *Priocnemis parvula* Dahlbom, *Pompilus cinereus* (Fab.), *Episyron rufipes* (Fab.), *Anoplius infuscatus* (Van de Linden), *A. viaticus* (Linn.), *Arachnospila anceps* (Wesmael), *Evagetes crassicornis* (Shuckard).

EUMENINAE: *Odynerus spinipes* (Linn.).

VESPINAE: *Vespula germanica* (Fab.), *V. vulgaris* (Linn.).

SPHECIDAE: *Anomophila sabulosa* (Linn.).

CABRONIDAE: *Tachysphex pompiliformis* (Panzer), *T. nitidus* (Spinola), *Crabro peltarius* (Schreber), *Crossocerus annulipes* (Lepeletier & Brullé), *C. ovalis* Lepeletier & Brullé, *C. quadrimaculatus* (Fab.), *C. tarsatus* (Shuckard), *Lindenius albilibbris* (Fab.), *Entomognathus brevis* Lepeletier & Brullé, *Oxybelus uniglutinus* (Linn.), *Mimesa lutaria* (Fab.), *Diodontus insidiosus* Spooner, *D. minutus* (Fab.), *Mellinus arvensis* (Linn.), *Nysson spinosus* (Forster), *Gorytes quadrifasciatus* (Fab.), *Cerceris arenaria* (Linn.), *C. rybyensis* (Linn.), *Philanthus triangulum* (Fab.).

COLLETINAE: *Colletes succinctus* (Linn.).

ANDRENINAE: *Andrena barbilabris* (Kirby), *A. bicolor* Fab., *A. cineraria* (Linn.)

A. clarkella (Kirby), *A. fulva* Müller in Allioni, *A. fuscipes* (Kirby), *A. haemorrhoa* (Fab.), *A. minutula* (Kirby), *A. nigroaenea* (Kirby), *A. ovatula* (Kirby), *A. praecox* (Scopoli), *A. scotica* Perkins, *A. subopaca* Nylander, *A. tibialis* (Kirby), *A. wilkella* (Kirby).

HALICTINAE: *Halictus rubicundus* (Christ), *H. tumulorum* (Linn.), *Lasioglossum calceatum* (Scopoli), *L. ephippius* (Linn.), *S. geoffrellus* (Kirby), *L leucopus* (Kirby), *L leucozonium* (Schrank), *L. minutissimum* (Kirby), *L. monilicornis* (Kirby), *L. pellucidus* Smith, *L. punctatissimum* (Schenck), *L. villosulum* (Kirby), *Sphecodes crassus* Thomson, *S. gibbus* (Linn.), *L. reticulatus* Thomson.

MEGACHILINAE: *Megachile versicolor* Smith.

ANTHOPHORINAE: *Nomada fabriciana* (Linn.), *N. flava* Panzer, *N. fulvicornis* Fab., *N. goodeniana* (Kirby), *N. lathburiana* (Kirby), *N. leucophthalma* (Kirby), *N. rufipes* Fab., *N. striata* Fab., *Epeolus cruciger* (Panzer), *E. variegatus* (Linn.).

APINAE: *Bombus hortorum* (Linn.), *B. lapidarius* (Linn.), *B. lucorum* (Linn.), *B. pascuorum* (Scopoli), *B. pratorum* (Linn.), *B. terrestris* (Linn.), *B. bohemicus* (Seidl), *B. sylvestris* (Lepeletier), *B. vestalis* (Geoffroy in Fourcroy), *Apis mellifera* Linn.

BOOK REVIEW

Botanic Gardens: Modern-Day Arks by Sara Oldfield. Pp. 240. New Holland. 2010. £24.99.

From the cover title, Sara Oldfield's clarion call is no mere last-post epitaph, but a call to action from this champion of threatened plants. The biblical flood has taken the form of waves of genocide, and a rising tide of accelerating destruction. Although the popular image of the botanic garden might be as some form of recreational park or proving ground and trial site for plants, here it is cast as an ark when it is too late for habitat protection, and it's all aboard, two by two.

Her survey is a damage control report from 13 countries struggling to contain the actions of humans. Each has its own national and international programme and has responded according to the particular problems faced. France has put to use its collection of remote islands which have missed the boat on independence. Scotland has offered asylum for trees on the run from the Andes. The USA is home to both the best and worst thinking across the diversity of its states. China's increasingly active conservation programme makes it no longer just an exporter of species and it is now more than awake to its own environmental catastrophes.

Cautionary tales abound, as do success stories, and the reader is very rarely left hopeless, or hopeless for too long. Oldfield's calm objective narrative lets the one decide, in the style of Attenborough himself. The photos show vulnerable beauty and last-chance-to-see diversity. Conservation of trees and plants often lacks the TV appeal at which pandas and whales excel, but here we are shown the growing support to avoid doomsday. The botanic garden's future is bright indeed in the safe hands of Sara Oldfield.

HC

YORKSHIRE NATURALISTS' UNION EXCURSIONS IN 2009

Compiled by
ALBERT HENDERSON and ADRIAN NORRIS

CASTLE HOWARD ARBORETUM (VC62) 16 May 2009

INTRODUCTION (J.M. Blackburn)

The meeting was held in the arboretum at Castle Howard (NGR Centrum SE706698). Whilst the 150 acres are devoted to a collection of hardy woody plants to save and protect for future generations to enjoy, there was a sufficiency of different habitats within the grounds to provide interest for those attending. The party of 20 members assembled on a dull morning, but the weather improved as the day progressed and was only spoiled by a sharp shower late in the day. The area around Arboretum Lake and Atkinson's Bog received the most attention; several dragonflies were recorded here, with Large Red, Azure and Blue-tailed Damselflies all present. Frogs were plentiful and a dead toad was seen. In other parts of the arboretum, molehills were noted and rabbits and a hare were seen.

The indoor meeting, held in the visitor centre following refreshments, was attended by 13 members representing 15 affiliated societies. Following the reports, there was much discussion about conservation and management within the arboretum. The area was thought to be too tidy, but it had to be recognised that this was an arboretum where future plantings were planned and not a nature reserve. The trees were nicely labelled and it was suggested that perhaps lists of the flora and fauna found on the site could be made available to the visiting public for added interest. The dead wood near the boundary wall and also the Rootery was a welcome sight as this adds an important habitat for invertebrates and lower plants. Sata Pond has become overgrown and regular clearance of small amounts of vegetation on a rotational basis was recommended.

A vote of thanks to the trustees was passed, to whom details of the day's findings would be sent. Thanks were also paid to the Excursion Secretary and Divisional Secretary for organising the meeting.

CONCHOLOGY (T. Crawford)

Although no formal search was undertaken for Mollusca, eight species of slugs and six species of snails were casually noted. All were very much to be expected, with *Lehmannia marginata* being found in the older wooded areas and *Deroceras laeve* near the ponds.

LEPIDOPTERA (T. Crawford)

The rather cool and overcast weather was poor for butterflies. During periods when the sun emerged it was striking how rapidly Green-veined White suddenly took to flight in good numbers, especially near the ponds and boggy areas. A few Large White and Speckled Wood appeared during the sunny intervals, and also seen were singletons of Orange-tip, Small Copper and Wall. The last was a welcome sight given its very dramatic declines in central and southern England, and reduced records in Yorkshire during 2007 and 2008 which might, or might not, reflect the poor summer weather in those years. Four species of moths were noted: *Anthophila fabriciana* (Choreutidae), a micromoth commonly associated with nettles, two geometrids (Water Carpet and Common White Wave), and a pupa of Bulrush Wainscot (a noctuid).

DIPTERA, HYMENOPTERA AND ODONATA (A. Grayson)

The day was unseasonably cool with alternating periods of sunshine and showers; hence insects were somewhat confined to sheltered situations. The writer investigated four areas, viz. the margins of Arboretum Lake (SE705698); the margins of Atkinson's Bog (SE705700); the margins and vicinity of Sata Pond (SE696697); and the vicinity of Bastion

Wall (SE705695) which included some ancient oaks near to the wall and new plantations south of the visitor centre.

Spring Diptera were moderately abundant in Castle Howard Arboretum, and included the soldier-fly *Beris chalybata* which occurred in all four areas investigated. Another soldier-fly, *Microchrysa polita*, was found near Bastion Wall, as were the following empidoids: *Bicellaria vana*, *Ocydromia glabricula*, *Platypalpus cursitans*, *Empis digramma*, *E. nigripes*, *E. planetica*, *E. scutellata*, *E. tessellata*, *Hilara fuscipes*, *H. interstincta*, *H. maura*, *Rhamphomyia crassirostris*, *R. pilifer* [= *R. dentipes*], *R. sulcatella* and *R. tibialis*. Additional empidoids found elsewhere were *Rhamphomyia albohirta* from Atkinson's Bog and *Raphiphium caliginosum* and *Sympicnus desouteri* from Sata Pond. Arboretum Lake yielded the local marshland hoverfly *Helophilus hybridus*, but the margins of the lake mainly lacked vegetation and were relatively uninteresting to the entomologist. By contrast, the sheltered Atkinson's Bog had an extensive border of decaying vegetation and flowering plants, and a far more numerous insect fauna, including the hoverflies *Cheilosia albifasciata* [sensu stricto], *C. antiqua*, *C. fraterna*, *Melanogaster hirtella*, *Neoascia tenur* and *Eristalis intricarius*. Hoverflies also took advantage of the sheltered conditions near Bastion Wall, and the fauna here included *Cheilosia pagana*, *Epistrophe eligans*, *Helophilus pendulus* and *Xylota segnis*, as well as the sepsid *Nemopoda nitidula*.

Diptera were present in reasonable numbers around Sata Pond, which was shallow and well vegetated, and included numerous plants in flower, and much decaying plant-matter around its margins. Several examples of the large parasitic fly *Tachina fera* were present at Sata Pond, whilst the hoverfly fauna included *Leucozona lucorum*, *Cheilosia fraterna*, *Neoascia meticulosa* and *N. tenur*. The sciomyzid *Elgiva cucularia* was present here, and was also found at Arboretum Lake.

The cool conditions did not suit hymenopteran activity, and only queens of the following common bumblebees were recorded: *Bombus lucorum* from near Arboretum Lake, and *B. lapidarius*, *B. pascuorum* and *B. terrestris* from near Bastion Wall. The only damselfly seen was *Pyrrhosoma nymphula* which occurred near the Visitor Centre and at the margin of Arboretum Lake.

PLANT GALLS (T. Higginbottom)

The gall wasps on oak usually have two generations. In most cases the spring generation is the sexual generation which produces both male and female gall wasps, whereas the agamic generation of summer and autumn produces female gall wasps. The gall structure of each generation is different and often a different part of the host is parasitized. The most interesting and unusual feature of the day was seeing the spring generation and the summer/autumn generations on the same day. The smooth currant galls of the spring generation of the common spangle, *Neuroterus quercusbaccarum*, were quite common on some of the male catkins of *Quercus robur* and *Q. petraea*. It was good to see so many examples of this gall because in 2006 and 2007 the common spangle was far from common. On some leaves there were also examples of the light green blisters of the spring generation of the silk button gall *Neuroterus numismalis*. Later in the day Don Grant passed to me a very large oak leaf which also contained distinct but weather-worn examples of the summer generations of these galls, the flattened disks of both *N. quercusbaccarum* and the golden silk button of *N. numismalis*. After a little searching the careful labelling of the arboretum revealed that the leaf was from *Quercus canariensis*, the Algerian Oak. This is a deciduous oak but the leaves remain on the tree throughout the winter until the following spring. Nearby was another non-native oak, *Q. canariensis* x *robor*. The long male catkins supported an abundance of the currant gall of *N. quercusbaccarum*. Another highlight was discovering an aphid gall on *Populus nigra*. The central midrib of some leaves had been swollen into a bright red, elongate pouch caused by *Pemphigus populinigrae*. *Tilia cordata* seemed to be common in different parts of the arboretum and many of the leaves showed light coloured blotches on the upper surface which indicated the presence of the erineum of the mite gall *Eriophyes leiosoma* on

the under side of the leaves. On some leaves there was an upward roll on the edge of the leaf which indicated the presence of the larvae of the midge gall *Dasineura tiliæ*. Altogether twenty-three different gall causers were recorded which is a good list for this time of the year. A late summer visit seems an interesting prospect.

BOTANY (D.R. Grant)

A large area of the Arboretum consists of mown grassland which has a very limited flora, therefore members concentrated on the ponds and the adjacent areas of bogs and unmanaged grassland. The large pond had a fine display of *Menyanthes trifolia*, there being several hundred flowers in full bloom. There were also extensive beds of *Carex rostrata*. The pond margins had *Phragmites australis*, *Phalaris arundinacea*, *Scrophularia aquatica* and *Eleocharis palustris*. In the Atkinson Bog area there were some old specimens of *Carex paniculata*. Damp woodland here had *Ceratocapnos clavulata* and *Dryopteris carthusiana*. Several other common sedges were noted; in one area where the grass had not been cut there were two areas of *Carex disticha*. Open water had colonies of *Hippurus vulgaris* whilst the Sata Pond had *Potamogeton natans*. There were a number of introduced plants in the boggy areas viz. *Gunnera manicata* (in flower), *Carex pendula* and *Astilbe* species. There were very few brambles; *Rubus vestitus*, *R. echinatoides* and *R. hylocharis* were the only ones discovered. A member of staff intimated that *Orchis mascula* had finished flowering and there were other species growing in the Arboretum grounds.

BRYOLOGY (J.M. Blackburn)

The morning was spent in the area of Arboretum Lake and Atkinson's Bog. The lakeside fringes were colonised by *Calliergonella cuspidata* and much *Cratoneuron filicinum*. The sloping grassy banks held *Rhytidadelphus squarrosus*, *Scleropodium purum* and several colonies of *Polytrichum formosum*. A culvert had a mass of *Conocephalum conicum*. The Rootery, with its dead wood, was quite productive, with *Aulacomnium androgynum*, *Campylopus introflexus*, *Dicranella heteromalla*, *Orthodontium lineare* and both *Lophocolea bidentata* and *L. heterophylla*. The tree cover was largely disappointing, but *Orthotrichum affine* and *O. diaphanum* were occasionally seen and *Metzgeria furcata* was common. A willow near Sata Pond had a patch of *Metzgeria fruticulosa*. The find of the day was fruiting *Cryptphaea heteromalla* on a tree near the Dew Pond; this is only the fourth currently known record in the vice county.

The long wall on the southern boundary was quite productive. Here *Barbula convoluta* vars *convoluta* and *commutata* were both plentiful, also *Encalypta streptocarpa*, *Homalothecium sericeum*, *Neckera complanata* and *Rhynchostegiella tenella*. Where soil had formed on ledges in the wall, large patches of *Euryhynchium striatum*, *Plagiomnium undulatum* and the dendroid moss *Thamnobryum alopecurum* had become established. The large grassy areas of the arboretum, with little or no bryophyte content, were relieved by the habitats described above, and a total of 42 species was recorded.

MYCOLOGY (A. Legg)

At this time of year, the eye-catching mycorrhizal toadstools so attractive to the non-specialist are very little in evidence and none was found. Effort was largely restricted to the area around the Arboretum Lake and the adjacent Atkinson's Bog in the hope of finding material of the other two main groups of fungi – phytoparasites and saprobes of dead plants; it proved an unusually poor year for the former. Only two rusts were seen, the common *Triphragmium ulmarium* on leaves of *Filipendula*, reported by Tom Higginbottom, and lots of old telia of *Puccinia magnusiana* on dead stems and leaf-sheaths of *Phragmites*. The only smut found was the common *Microbotryum violaceum* on anthers of *Selene dioica* and even this had to be searched for. Ageing leaves of *Ranunculus ficaria*, usually reliable for two rusts, a smut and a downy mildew, produced nothing that this writer saw and the usual parasites of *Anemone nemorosa* seemed also to be absent.

Of the total of only 27 species of fungi recorded, 24 were saprobes, most of which are

rather common. The only toadstool in evidence was the coloniser of fallen pine cones, *Strobilurus tenacellus* under young pines between the car park and the visitor centre, an area which also produced the puffball *Lycoperdon perlatum*. Of the microfungi seen it is perhaps worth mentioning the plurivorous *Thyridaria rubronotata* here seen on dead twigs of *Fagus*, and the specialist hyphomycete, *Corynespora olivacea*, very prolific on dead twigs and branches of mature *Tilia*. The small cup-shaped basidiomycete *Calyptella capula*, which experienced recorders associate with dead stems of *Urtica dioica* and beginners mistake for a discomycete, was here found on dead *Arctium* lying in damp grass. A pleasant outing whose rather disappointing haul may have been attributed in part to exceptionally healthy plants but mainly to dry weather in March and April.

LICHENS (Janetta Lambert)

On the west shore of Arboretum Lake a silver birch (*Betula pendula*) which was divided at the base into several trunks had a prolific growth of lichens. A sample was collected and the following were later determined by Albert Henderson: *Cladonia fimbriata*, *Hypogymnia physodes* and *H. tubulosa*.

HOWELL WOOD (VC63) 20 June 2009

INTRODUCTION (R.J. Marsh)

Fourteen members gathered at this venue on an overcast morning which developed into an afternoon of fine warm weather. Howell Wood (NGR Centrum SE433099), a designated site of ancient woodland and a Local Wildlife Site within the Doncaster Metropolitan Borough, is situated on the Coal Measures series of rocks which gives rise to a mildly acidic clay soil. The indoor meeting took place in the comfortable lounge of the Great Houghton Miners' Welfare facility, where 13 members representing 15 Affiliated Societies were present.

MAMMALS AND AMPHIBIANS (R.J. Marsh)

Hedgehog, Grey Squirrel, Rabbit were seen and evidence of Mole was observed. Common Frog and Common Toad were observed at stream edges on the eastern edge of the Wood.

CONCHOLOGY (T. Crawford)

No formal searches were made for Mollusca, but casual observations revealed 15 species (nine slugs and six snails). Of note were several individuals of *Arion silvaticus* in the low-lying, rather damp area at the most easterly point of the wood. This species of slug was only recognised in Great Britain as distinct from *A. circumscriptus* (which was also found in the same area) in the 1960s, and in Yorkshire *A. silvaticus* seems to be by far the rarer. Of even more interest was a good-sized (c. 15 cm) *Limax cinereoniger*, of a brownish colour rather than the more usual dark grey, feeding on a deposit of dog faeces. This slug is characteristic of ancient woodland, and it is ironic that a by-product of modern recreational use of Howell Wood should have brought it to our attention.

ENTOMOLOGY (A. Grayson)

The writer ventured from the car park (SE433098) to the pond (SE435097), during weather which was mainly fair and pleasantly warm, and therefore generally conducive to entomological activity. For the most part, Howell Wood was made gloomy by density of canopy, but there were a few small sunny glades, and herb-rich margins adjoined parts of the woodland edge. The car park was surrounded by lush vegetation, and the assemblage there included the solitary wasp *Argogorytes mystaceus*, the bumblebees *Bombus hortorum*, *B. lucorum* and *B. pascuorum*, and the large parasitic fly *Tachina fera*.

The pond held limited appeal to the entomologist, as its well-maintained sides were banked with wood, and it had only a small inaccessible area of emergent vegetation.

However, dolichopodids were fairly abundant around the margins of the pond, and the writer took the following species: *Argyra diaphana*, *A. vestita*, *Dolichopus unguilatus*, *Gymnopternus cupreus*, *Poecilobothrus nobilitatus*, *Rhaphium appendiculatum* and *Sybistroma crinipes*. Roy Crossley also found *S. crinipes* in Howell Wood, and commented that it tends to be a rather localized species in much of Yorkshire, although with no clear habitat association. Another noteworthy dolichopodid found by Roy Crossley was the tiny *Anepsiomyia flaviventris*, which occurred in a spot where drainage was impeded.

Insects were undoubtedly most numerous along a strip of herb-rich scrubby grassland situated immediately across the stream that borders the north-eastern boundary of the wood (SE435098). This scrubby grassland was dominated by plants such as *Leucanthemum vulgare* and *Ranunculus*, and had a fairly rich Dipteran fauna, including the Nationally Notable crane-fly *Limonia trivittata*, and the hoverflies *Chrysogaster solstitialis*, *Sphegina clinipes*, *S. elegans* and *S. verecunda*; all of which were recorded by Roy Crossley. The writer's list for the same area included various common Brachycera plus the more local hoverflies *Chrysogaster solstitialis* and *Riponnensia splendens*; the damselfly *Ischnura elegans*; the bumblebee *Bombus lapidarius*; and the butterflies *Ochlodes venata* Large Skipper, *Pieris brassicae* Large White, *P. napi* Green-veined White and Speckled Wood *Pararge aegeria*.

COLEOPTERA (R.J. Marsh)

A wide range of common and widespread Coleoptera species expected to occur on the woodland floor was noted. Sieving ground litter at the sides of the Howell Beck produced a range of staphylinids including several species each of the genera *Atheta* and *Oxypoda*. A single specimen of the carabid *Bembidion femoratum*, a very widespread species but with few recent (post-1990) records, was found in this situation, and was reported by Mr Kendall.

BOTANY (D.R. Grant)

The main feature of the Wood was the number of bramble species seen. *Rubus dasypylillus* and *R. vestitus*, two common species, were distributed throughout the Wood. At the north end of the site large colonies of *R. rufescens* were noted. This species is an ancient woodland indicator and is found in several woods in South Yorkshire. *R. newboldii*, nationally a northern species, occurred in the southern section of the site. Around the pond *R. polyanthemus* was discovered. The woodland margins at the edge of the open area had *R. sprengelii* which was in flower attracting many bumblebees. This area also had *Hieracium vagum* together with *Carex pulifera* and *Carex hirta*. *Equisetum sylvaticum* and *Milium effusum* were growing in shady areas. Three spikes of *Dactylorhiza praetermissa* were reported from a boggy area. The most notable plant found was Alder Buckthorn *Frangula alnus* which was growing with Aspen *Populus tremula* in the wet area in the centre of the Wood; also reported by others were Hard-fern *Blechnum spicant* and Wood Horsetail *Equisetum sylvaticum*.

PLANT GALLS (T. Higginbottom)

The most interesting aspect of the plant galls recorded was not the number of different species but the abundance of some galls. On young beech saplings the erineum caused by the mite *Aceria fagineus* was abundant between the leaf veins on the undersurface of the leaves. A similar-looking erineum caused by the mite *Acalitus rudis* was also common on the under surface of the leaves of birch. It was good to see the spring sexual generation of some gall wasps on oak. The currant gall *Neuroterus quercusbaccarum* was easily discovered on both the male catkins and the leaves. Also on the upper surface of a number of leaves were the small blisters of the sexual generation of the silk button gall *Neuroterus numismalis*. There were numerous examples of the *Cynips* species of pea galls on many of the leaves of oak saplings. Unfortunately they were so small at this stage in their life cycle it was not possible to determine whether they were *Cynips agama*, the thin-walled gall, or

Cynips divisa, the thick-walled gall. Other interesting records included a galled tip of a pinnule of bracken which had been rolled downwards, caused by the fly *Chirostia grossicauda*. This appears to have become a less common gall in recent years. It was also good to see a gall on lady-fern, where a frond was rolled upwards to form a loose mop head caused by the fly *Chirostia betuleti*. This gall is more frequently seen on male-fern and broad buckler-fern. Howell Wood has been a good venue for cecidologists and although only thirty different galls were discovered during this meeting, a visit later in the year should probably double this number.

BRYOLOGY (J.M. Blackburn)

The ground flora in the wood contained no surprises, with *Atrichum undulatum*, *Dicranella heteromalla*, *Fissidens taxifolius*, *Mnium hornum*, *Pseudotaxiphyllum elegans* and *Cephalozia bicuspidata* all present. Epiphytes were common, mainly on tree bases, with *Dicranoweisia cirrata*, *Orthodontium lineare* and *Orthotrichum affine* all seen. Several logs provided interest with *Lophocolea bidentata* and *L. heterophylla* in some quantity. A streamside had good-sized patches of *Pellia epiphylla*. This was a rather disappointing wood which produced a total of 17 species.

KETTLEWELL (VC64) 4 July 2009

INTRODUCTION (A. Norris)

A large number of members and friends, representing 12 societies attended the VC64 field meeting to Kettlewell (NGR Centrum SE967723). The main area visited was the National Trust Estate on the western banks of the River Wharfe. The local weather reports for the day were for a fine morning followed by heavy showers in the early afternoon. However, the predicted heavy showers never materialised and the day was fine if a little too hot for some. The parking in the field just west of the river at Kettlewell by kind permission of the tenant farmer Mr Charles Lister proved to be ideally situated within walking distance of the Kettlewell Primary School from which some of the moth trapping was taking place, as well as being the venue for the afternoon meeting. I would like to take this opportunity to place on record our thanks to the school, in particular Tracy Briggs, and the Parent Teachers' Association for both allowing us to use the school and for laying on the very welcome afternoon tea and cakes. We would also like to thank the National Trust for allowing us to have full and unrestricted access to the estate.

The following reports indicate just how important the Kettlewell area is as regards the flora and fauna of the county. The reports indicate the importance of regular surveys of such localities to try and ensure that the species known to occur within an area are flourishing. New records, both good and bad, may also need to be regularly monitored to assess the effects such additions may have on the flora and fauna of a given area.

VERTEBRATES (J.A. Newbould)

Although there was evidence of Rabbit frequently grazing in the meadows I surveyed, just two individuals were seen near Starbotton where mole-hills were also seen. Dr T.J. Whitaker reported Hare from Gate Close Scar. Miss J. Lambert reported Toad near the River Wharfe (SD9672) from where Dr J. Allinson reported a shoal of Minnow *Phoxinus phoxinus*.

ORNITHOLOGY (J.A. Newbould)

Four observers notified 23 records of 19 species during the day. Of particular interest were Little Owl *Athene noctua* and Wheatear *Oenanthe oenanthe* from Great Close Scar from Dr T.J. Whitaker, whilst Dr S. Sutton reported Grey Heron *Ardea cinerea* flying over the River Wharfe. Mr J. Newbould surveyed the area west of the River Wharfe between Kettlewell and Starbotton and recorded nesting sites on the east bank, together with a small party of

Sand Martin *Riparia riparia* (SD955737). Dipper *Cinclus cinclus* and a pair of breeding Yellow Wagtail *Motacilla flava* were in the same area. Both Curlew *Numenius arquata* and Oystercatcher *Haematopus ostralegus* were calling during the day with a party of ten of the latter flying over.

CONCHOLOGY (D. Lindley & A. Norris)

The Conchological Section concentrated on the area to the south-westerly side of the river in squares SD9572 and SD9672. This area provided a diverse number of habitats including limestone crags and outcrops, flushes, unimproved and improved pasture, and some woodland and drystone walls on the lower parts. Altitude ranged from c. 210 to 450 m. These squares provided a total of 34 land species, with no freshwater species being recorded. There has been much work conducted recently in the Upper Wharfe valley but it was pleasing to see a number of new records for the above squares with 30 and 29 species being found respectively. There were no new 10km records.

The following are worthy of note. *Vitreorubrimate* was found in both squares at c. 300 m. This is a cryptic species and is best found by looking under deep-set blocks of mountain limestone. This species is only found in Britain on the mountain limestone of the Northern Pennines and is now found in eight 1 km squares in Upper Wharfedale. A colony of *Vallonia costata* was found under herbage on an area of flat limestone pavement. This is an uncommon species in the Dales and this brings the total number of sites for Wharfedale to three. It was pleasing to find a colony of *Vertigo substriata* in one of the many flushes which run through the area. This species has a very scattered distribution throughout Yorkshire as a whole and it is interesting to note that although upwards of 15 flushes were looked at during the day it was only found in one.

Lastly we come to the most interesting find of the day. Whilst examining the litter build-up on a short section of north-east facing limestone crag, a small colony of *Vertigo pusilla* was found. A total of 6 specimens was found including two juveniles. This tiny species is extremely rare in Yorkshire and is only known from four other extant sites. In northwest England it is generally associated with shaded drystone walls which are often, but not always ivy-covered. It was therefore of great interest to find it in this location which is the only known 'natural habitat' in Yorkshire. It should be pointed out that it was some distance from any walls and that none appeared suitable.

LEPIDOPTERA – Butterflies (T.M. Whitaker)

Unfortunately the previously hot and sunny weather had become changeable but remained quite warm <18°C with occasional spells of strong sunshine but the southerly breeze was quite strong higher up. The sunny spells encouraged the butterflies to appear in sheltered areas and 12 species were seen. Large White and Small Whites were seen mainly close to Kettlewell village. A few Green-veined Whites were seen close to the river. Three male Northern Brown Argus were recorded near Cote Scar Quarry, but the extensive Rockrose patches on the upper pastures west of Kettlewell were devoid of the species. Common Blues, mainly males, were widely present in the meadows and ungrazed areas in the valley bottom. The Browns were the commonest species with Ringlets present in large numbers in all areas of long grass. Meadow Browns were also widely distributed but in low numbers and on the upper pastures Small Heath was widely distributed. A single Small Tortoiseshell, the start of the summer brood emergence, was seen near the village. Of the migrant vanessids Painted Lady was widely distributed and an occasional Red Admiral was seen. A single newly emerged Dark Green Fritillary was reported from a meadow near Cote Scar.

LEPIDOPTERA – Moths (C. Fletcher)

Several MV traps were set up along the footpath running along the west side of the River Wharfe taking in both herb-rich grassland and woodland with sycamore and ash. Single MV and actinic traps were set up on the other side of the river at Borrins School. The traps were stopped up soon after dawn and emptied at 10.30 before an enthusiastic party of

onlookers. The temperature was a healthy 14 degrees at dusk but, with a clear sky and a moon only three days before full, the night was not a perfect one for moth trapping. The total catch was 1016 moths of 87 species, a remarkable 83 of which were new for the 10K square SD97 – one of several very under-recorded squares in the Yorkshire Dales. The species included many typical of upland calcareous habitats. Coronet was a new moth for many onlookers with a total of seven trapped, as was Heart and Club with 18 trapped. Other moths of interest included Grey Mountain Carpet, Grass Rivulet and Purple Bar. Examples of Gold Spot and Lempke's Gold Spot enabled the difference between the two taxa to be seen. Two worn pugs were taken away for dissection and both proved to be rarities, Valerian Pug and Thyme Pug, showing the value of dissecting worn pugs in unfamiliar surroundings. A good selection of microlepidoptera included the Oecophorid *Pleurota bicostella*. The commonest moth by far was Muslin Footman with 424 trapped.

The hunt for moths continued in the daytime, the best find being Least Minor flying near Cote Scar; this is an RDB3 species with a very restricted distribution in the county and indeed nationally.

PLANT GALLS (J.A. Newbould)

Seventeen records of 13 galls were made from seven woody plants and three herb species between Starbotton and Kettlewell. Many of these are commonly reported but of particular note is the north of England species *Euura amerinae*, which forms a swelling in the twigs of *Salix pentandra*, found along the River Wharfe near Kettlewell (43/9672). Adjacent to the River Wharfe on the leaves of *Salix purpurea* was the gall *Pontania viminalis*; my attention was first drawn to this species by the late Fred Stubbs in the mid-1980s at Marrett Bridge (43/9086) where they were found in plenty the following day. Only two records were made of the fungal gall *Triphragmium ulmariae* on *Filipendula ulmaria*; whilst there is plenty of the host plant, this gall appears to be quite scarce.

BOTANY (D.G. Grant & J.A. Newbould)

(DRG) The botanists visited the limestone scar on the south-west of the village. The lower slopes were fairly moist and *Primula farinosa* growing here was still in flower. Other plants of note were *Schoenus nigricans*, *Valeriana dioica*, *Carex hostiana* and *Gymnadenia conopsea*. Climbing higher up onto drier areas there were *Helictotrichon pratense*, *Koeleria macrantha* growing with *Galium sterneri* and *Sesleria caerulea*. The limestone cliffs were then examined where several colonies of *Galium boreale* were growing on tiny ledges. Ferns were represented by *Asplenium ruta-muraria*, *A. trichomanes* and *Cystopteris fragilis*. A small colony of a large flowered Hawkweed was in one area and a specimen was taken to be forwarded for identification by the experts.

Members then moved downwards to examine flushes seeping out of the hillside. There were several sedges here: *Carex flacca*, *C. panacea*, *C. lepidocarpa* and *C. hostiana*; also on the stony margins were clumps of *Eleocharis pauciflora*.

The hay meadows and river bank were visited on the return journey to the car park. The flower-rich hay meadow had large colonies of *Sanguisorba minor*, *Dactylorhiza fuchsii* and *Geranium sanguineum*. The river bank provided the home for *Campanula latifolia* and *Crepis paludosa*. There were some healthy trees of *Ulmus glabrum* here too. There were two rare species of willow in this area, *Salix purpurea* and one old and several smaller bushes of *S. pentandra*.

(JAN) This has been my fourth visit to Kettlewell in the past three years so I planned to survey along the River Wharfe to Starbotton. The National Trust owns much of the area surveyed, which forms part of the Upper Wharfedale SSSI. Mr K. Walker of B.S.B.I. had drawn my attention earlier in the week to a meadow on the east-facing slopes near Starbotton where *Crepis mollis* is found. Here I also found *Alchemilla filicaulis* ssp. *vestita* (conf. P.A. Abbott), *Conopodium majus* and *Potentilla erecta*. This hay meadow with little scrub, few coarse herbs and 30% cover of herbs seemed to be in good condition. Just

south-west of Starbotton (SD9574) in the valley bottom was an area of fen vegetation dominated by *Carex acutiformis* forming a NVC type S7 swamp with *Lotus pedicularis*, *Lychnis flos-cuculi*, *Caltha palustris* and *Glyceria declinata* associated with a wet ditch. In drier areas is a NVC grassland community MG9 dominated by *Holcus lanatus* and *Deschampsia cespitosa*.

Within the National Trust holding is a series of north-east facing hay meadows with a gentle slope to the River Wharfe. Although classed by Natural England as upland hay meadows, they are all in fact below 260 m. Here (SD9673) earlier in the year the meadows are white with Pignut and yellow with *Ranunculus acris*. However, with only limited recording from the margins, just twenty-five species were recorded from NVC communities MG3 and MG5 with *Sanguisorba officinalis*, *Galium verum*, *Lotus corniculatus* and *Rhinanthus minor*. The north-west field had a broken wall forming Calaminarian grassland with *Viola lutea*, *Minuartia verna* and *Thymus polytrichus*. These species were also found along a dried-out stony gill leading to the upper limestone grass area.

To complement the moth-recording effort, note was made of species adjacent to the River Wharfe (SD966725) near the bridge. Here the trees were mainly *Fraxinus excelsior* complemented by *Salix cinerea*, *S. x reichardtii* and *S. pentandra*. Whilst the herb vegetation was mainly rank grassland there was both a neutral and limestone influence with both *Sanguisorba minor* and *S. officinalis*.

BRYOPHYTES (T. Blockeel).

The bryologists followed a relatively short route along Knipe Scar to the southern end of Springs Wood, returning along the banks of the R. Wharfe. Preliminary recording near the bridge at Kettlewell produced *Orthotrichum stramineum* on sycamore. On the walk up to Knipe Scar *Entodon concinnus* (very sparsely) and *Dicranum bonjeanii* were found in the turf. The richest areas, however, were the flushes and wet tufa below the scar, notably with a good population of *Orthothecium rufescens*, but also *Preissia quadrata*, *Jungermannia exsertifolia* var. *cordifolia*, *Didymodon spadiceus*, *Hymenostylium recurvirostrum*, *Breutelia chrysoscoma*, *Philonotis calcarea*, and both *Palustriella falcata* and *P. commutata*. Other records on and about the rock outcrops were *Tritomaria quinquedentata*, *Plagiochila britannica*, *Frullania tamarisci* and *Pohlia cruda*. The southern end of Springs Wood added a few woodland species to the list, including *Lejeunea cavifolia* and *Nowellia curvifolia*. The banks of the R. Wharfe were very productive. The characteristic flood zone community was well developed on tree bases, with *Syntrichia latifolia*, *Tortula subulata*, *Orthotrichum sprucei*, *O. cupulatum*, *Leskeia polycarpa*, and others. *Fissidens rufulus* was on stones in the river, and *Schistidium platyphyllum* on the base of a sycamore. Epiphytes included *Syntrichia laevipila*, *Orthotrichum lyellii*, *Ulota phyllantha* and *Zygodon viridissimus* var. *stirtonii*. A total of 105 species was in SD97L and SD97R.

KELD (VC65) 25 July 2009

INTRODUCTION (T.M. Whitaker)

The run of westerly weather systems which had given rise to some severe rainfall events in the previous few weeks eased temporarily but with the calm came a cold clear Friday night which was not good for the moth-trappers. The Saturday dawned clear and sunny, the best day for several weeks, and c. 25 people assembled at the village hall to examine and photograph the contents of the moth traps. They then went off to visit the surrounding countryside (NGR Centrum NY892011). The company reassembled in the late afternoon for tea and biscuits and to present their findings. Thanks were voiced for the access granted by several local farmers and land owners to SSSIs in the area and for providing sites and electricity for the moth-trapping. Special thanks were due to John Rukin and his family who also provided assistance in transporting moth traps to West Wood.

VERTEBRATES (J.A. Newbould)

Without doubt the most eye-catching record made during the visit was Red Squirrel photographed by Denise Shields on the farm bird nut-feeder and seen by David Lindley in the car park. Two reports of Brown Hare were made, Kilsdon Side (SD893004) by Adrian Norris and west of Keld Lodge (SD890011) by Colin Shields. Evidence of Rabbit was everywhere with six seen in the vicinity of the Warren. In Angram, Adrian Norris noted a gibbet of eighteen Moles hung on a wire fence. The farmer in Keld reported the presence of both Stoat and Weasel in the dry stonewalls. He also reported that Brown Long-eared Bat is present in the area. David Lindley noted a Common Lizard at Argil (SD888005), and Common Frog was reported from Bridge End.

ORNITHOLOGY (C.G. Shields & J.A. Newbould)

Recording was concentrated in the Swale Valley immediately above and below the village, with some limited reports from the surrounding pasture, hay meadows and moorland. As might be expected, the two areas of sheltered woodland, West Wood and East Wood, held a good range of species associated with the Dales. Spotted Flycatcher was particularly numerous with five sightings of family groups. Two Common Redstarts and two Tree Pipits were also encountered. Small numbers of both Siskin and Redpoll were present and Nuthatch, Treecreeper and Great Spotted Woodpecker were seen. The latter species was also seen on a feeder in the village. Good numbers of House Martin were in the area. Pairs were noted nesting at Keld Lodge. Swallows and migrating Swifts fed over the valley, particularly noticeable on a reconnoitre on the preceding Thursday when there were sudden rain showers. Our group noted at least one hundred Jackdaws passing over Birk Hill around 11.00 am on Saturday morning. Raptors were disappointing in number. An adult and two young Kestrels were over Kisdon Scar on the Thursday, and a Sparrowhawk was pursued by hirundines near the Bunkhouse. Curlew were on the hill slopes of Kilsdon Side whilst at the same time fourteen Oystercatchers were mobbing a single Common Buzzard. A Little Owl was near the bus stop early in the morning and Tawny Owl was heard. A Dipper was seen on the Swale, west of the village. Warblers were represented by Chiffchaff, Willow Warbler and Blackcap. A single Pied Flycatcher was reported. A pair of Collared Dove was at the Bunkhouse, and up to ten Wood Pigeons were in a flock. Three Stock Doves were also seen. Waders were represented by six Oystercatchers and a Common Sandpiper which was well down the river towards Muker. Several Curlews were seen and a flock of approximately 60 Lapwings was present on rough fields near Keld Lodge. House Sparrows were common in the village, Meadow Pipits were encountered on the hillsides and also on the flat fields below the East Wood. A post-breeding group of 18 Mistle Thrushes fed on a field near the village. Returning to Keld from Angram one party had a number of good views of Redpoll. Twelve species were recorded in the vicinity of Gunnerside. In the village, House Martin and House Sparrow was seen in gardens. Redpoll was heard calling in the woods along Gunnerside Beck with Grey Wagtail seen on stones in the Beck near the village centre. Just a single Dipper was seen passing under the bridge over the River Swale on Saturday morning. David Lindley noted Little Owl on the southern edge of Gunnerside Pasture on Friday afternoon.

CONCHOLOGY (A. Norris)

David Lindley, John Newbould and the writer decided to spend Friday and Saturday recording in VC 65. On the Friday, nine 1 km squares in the area surrounding Gunnerside were visited and produced a total of 147 records made up of 47 species. On the Saturday we visited a further five 1 km squares and accumulated a further 88 records of 33 species. The two days resulted in a total of 51 species and 235 records being added to the 1 km recording scheme for mollusca.

The highlights of the two days included a fine specimen of the slug *Limax cinereoniger* found under a log in acid woodland in Gunnerside Gill, Upper Swaledale (SD94549911), alt c. 300m. The specimen had no coloration on its foot but still showed the tripartite sole

so characteristic of this species. At the end of the first day just as the light was fading we located a small twig by the side of the road at SD947977 on the outskirts of Gunnerside. The twig produced 11 species, including *Vertigo pygmaea*, *V. substriata*, *Columella edentula* and *Azeca tridens* any one of which would have been a very good record for the area. In Keld we were delighted to be able to reconfirm a record of the very small and rare wall snail *Vertigo pusilla*. Over the two days we collected specimens of the tree snail *Balea* which has recently been split into two different species. Although known as the tree snail it is rare on trees in Yorkshire and is usually found under the top-stones of dry-stone walls. Of the fourteen 1 km squares examined we located specimens in nine, all of which proved to be *Balea heydeni*.

LEPIDOPTERA – Butterflies (T.M. Whitaker)

The combination of altitude (over 300m) and the rather cool and breezy weather seemed to have inhibited the butterflies despite the strong sunshine. All the records were around Keld (NY8901). The sheltered conditions in West Wood led to a couple of Green-veined White (the first of the second brood) being seen and also a single Small Heath. Around the village two Small Tortoiseshell and a single Large White and Red Admiral were spotted. In addition John Newbould recorded Common Blue and Green-veined White near Gunnerside (SD9598). He also saw an unidentified fritillary (probably the Dark Green).

LEPIDOPTERA – Moths (C. Fletcher)

Several MV traps set up on Friday evening were sited in Keld village, on the north side of the Swale near Park Bridge and with the help of a friendly farmer and a four-wheel drive, at West Wood on the north bank of the river east of Keld. This arrangement meant that records were obtained for two 10 km squares in the area, NY80 and NY90, both lacking in moth records. As luck would have it, after several fairly warm nights, the temperature dropped to an unseasonable 9° by dawn. The traps were opened and the moths logged at the start of the meeting on the Saturday morning. A total of 75 species trapped was better than expected on a cold clear night in an upland habitat. Several fairly common upland species are rarely recorded by those who trap in the lowlands and many observers were able to see and photograph a number of new moths. These included Striped Twin-spot Carpet *Nebula salicata*, Welsh Wave *Venusia cambrica*, Northern Rustic *Standfussiana lucerneae*, and Scarce Silver Y *Syngrapha interrogationis*. One of the commonest moths with 80 trapped was surprisingly Square-spotted Clay *Xestia rhomboidea*, until recently a national BAP species. Upland broad-leaved woodland in the county contains nationally important numbers of this uncommon moth. Single examples of Common Rustic *Mesapamea secalis* and Lesser Common Rustic *M. didyma* were dissected and surprisingly proved to be the first confirmed records of each species for VC65 as no 'Common Rustics' in north-west Yorkshire appear to have been dissected in the past. Some particularly beautiful colour variations of Dark Marbled Carpet *Chloroclysta citrata* were seen and photographed.

Several interesting species of microlepidoptera were found. *Eana osseana* was present in good numbers, and *Depressaria pulcherrimella*, *Acampsia cinerella* and *Catopria margaritella* were new species to many present. The whole area, especially the woodland around West Wood, would repay further trapping sessions on warmer nights and at other times of the year.

DIPTERA, HYMENOPTERA AND COLEOPTERA (A. Grayson)

As the weather was mainly sunny, the writer headed northwards from Keld, and ascended to the summit of Haw Shaws Hill on Black Moor. A descending path towards a footbridge passes through a small glade close to the River Swale (NY895010), and it was here that the most noteworthy find of the day was taken in the very first sweep of the net which captured the soldier-fly *Oxytoma dives*. This species is very local in Yorkshire, but rare overall in Britain. The Dipteron assemblage in the small glade also included the bibionid *Bibio*

pomonae, the empidooids *Hybos femoratus*, *Argyra argentina*, *A. leucocephala*, *A. perplexa*, *Dolichopus plumipes* and *D. trivialis* and the hoverflies *Baccha elongata*, *Melanostoma scalare*, *Leucozona glaucia*, *Syrphus ribesii* and *Neoascia podagraria*.

The Black Moor area (NY8901 & NY8902) yielded only two bumblebees, *Bombus lucorum* and *B. pascuorum*, and a meagre list of Diptera including *Rhagio scolopaceus*, *Tachypeza nubila*, *Dolichopus trivialis*, *Episyrphus balteatus*, *Eristalis intricarius*, *E. pertinax*, *E. tenax*, *Helophilus pendulus* and *Sericomyia silentis*. The most interesting find on Black Moor was a colony of the local empidooid *Dolichopus rupestris* on blanket bog immediately south of Palla Nears (NY896026).

The bluebottles *Calliphora vicina* and *C. vomitoria* were abundant throughout the day, and particularly so in the immediate vicinity of Keld village, whilst the related *Cynomyia mortuorum* was present around sheepfolds at NY894018, together with the black burying beetle *Silpha atrata*.

PLANT GALLS (J.A. Newbould)

During the two days, 60 records of 31 species of plant galls on 19 host plants were accumulated from sixteen 1 km squares. In many ways, it was surprising how few galls were present in what is quite a wooded area. However, we were recording at higher altitudes, up to 370m. In these bleak areas, tree leaves are often damaged by wind. A lot of Ash was seen, but only in 100 m of roadside Ash in Gunnerside were galls noted *Dasineura acrophilla*, *D. fraxini* and two records of *Psyllopsis fraxini*. Generally, in searching for plant galls on willows the gall *Iteomyia capreae*, which was seen just twice on *Salix cinerea*, is accompanied on the same plant by *I. major*. The latter was absent. Among galls on herbs, there were two records for *Aceria thomasi* on *Thymus polytrichus*. In 2001 many *Prunus* species were affected by the fungal gall *Taphrina pruni*. A shopping stop in Muker (SD909978) yielded a record of this species. In contrast to Kettlewell the gall *Pontania viminalis* was only recorded once in Gunnerside but not on *Salix purpurea* but *S. viminalis*. Finally the most surprising gall was seen on a single bush of *Cornus sanguinea* where *Phyllocoptes depressus* was recorded on the western slopes of Kisdon Side SSSI.

BOTANY (D.R. Grant & J.A. Newbould)

(DRG) The area visited is situated on the Yoredale Series of rocks, these consisting of alternate layers of limestone, shale and sandstone. This gives rise to soils which are both alkaline and acid and this is reflected in the flora. Leaving the village on the Pennine Way footpath, the verges had *Myrrhis odorata* and *Alchemilla glabra* together with many bushes of *Prunus padus*. The damp woodland beside the river had the sedges *Carex pendula* and *C. strigosa*. A feature of the whole area were the many stands of *Cirsium heterophyllum*. Turf over limestone had *Helianthemum nummularium*, *Thymus polytrichus*, *Origanum vulgare* and *Clinopodium vulgare*, together with *Carex flacca* and *Briza media*. *Sesleria caerulea* and *Phleum bertolonii* were here in very small quantities. Acidic areas had *Stachys officinalis*, *Solidago virgaurea*, whilst damper areas had much *Juncus acutiflorus* and *Carex echinata*. The limestone cliffs here are almost vertical and have no ledges for plants to grow on, so no *Hieracia* were noted. There were no brambles due to the altitude of the area and its high rainfall. On the roadsides there were again many stands of *Cirsium heterophyllum* growing with *Galium mollugo*, *Rosa mollis*, *R. caesia* and *Chenopodium bonus-henricus*. There has been much lead mining carried out in this dale and there are many tips and spoil heaps which support *Minuartia verna*.

(JAN) In support of a VC65 Botanical Society of Great Britain initiative, lists were made from fourteen 1 km squares with over 500 records made in the two days. In addition, records were made of a number of veteran trees as part of a NYCC recording scheme. Site descriptions and species lists were prepared in Excel for North and East Yorkshire Ecological Data Centre. The first stop on Friday morning was to survey a disused quarry at

Hatters Roof (SD974975). Of particular interest at this site was the presence of the NVC **OV37** *Festuca ovina-Minuria verna* community on a roadside wall together with *Thymus polytrichus* and *Cirsium heterophyllum*. Generally the quarry has become overgrown with the typical ash community described below under Landscape. The next survey was of the area of Rowleth End Wood (SD968975) adjacent to the River Swale where *Salix pentandra* and *Viburnum opulus* contributed to a woodland flora dominated by *Fraxinus excelsior* and *Corylus avellana* coppice.

After lunch, a move was made northwards along the eastern bank of Gunnerside Beck towards Winterings Pasture, first passing through an area of wood pasture where *Fraxinus excelsior* and *Corylus avellana* formed a dense copse on the upper slopes. Initially the grassland was alkaline with *Trisetum flavescens* and *Brachypodium pinnatum*. A tufa spring was seen at SD95099853 with *Carlina vulgaris*, *Campanula rotundifolia*, *Thymus polytrichus* and *Briza media*. Very soon, the nature of the habits changed to more acid conditions with *Potentilla erecta* common in open grassland. There was a 250 m² area of NVC **W25** *Pteridium aquilinum-Rubus fruticosus* underscrub on a west-facing slope with *Holcus mollis*, *Hyacinthoides non-scripta*, *Digitalis purpurea* and *Teucrium scorodonia*. From here on the footpath climbs high above the gully containing Gunnerside Beck through NVC **W9** woodland with *Oxalis acetosella*, *Mercurialis perennis*, *Blechnum spicant*, *Lysimachia nemorum* with *Alnus glutinosa* and *Betula pubescens* at the streamside. At Winterings Pasture a field was quite yellow with *Potentilla erecta*. A gill ran through the meadow forming a NVC **MG9** *Holcus lanatus-Deschampsia cespitosa* rush area before disappearing underground (SD94629913) with *Hydrocotyle vulgaris*, *Veronica beccabunga*, *Achillea ptarmica* and *Caltha palustris*.

Later in the afternoon, Shore Gill south of Gunnerside Pasture was visited (SD935982). Shore Gill drains Gunnerside Pasture and Kisdon Moor and then forms the parish boundary between Muker and Melbeck. The NVC **MG10** rush pasture contains *Lychnis flos-cuculi*, *Equisetum palustre*, *Mentha arvensis*, *Galium palustre* with *Juncus effusus* and *Holcus lanatus*. At the roadside, a stone retaining wall was covered with *Asplenium adiantum-nigrum* and *Thymus polytrichus*. At Ivellet Bridge (SD933977) *Luzula sylvatica* was noted in two locations along the wooded bank of the River Swale. A roadside verge had *Myrrhis odorata*.

In contrast to Friday, Saturday morning was a bright clear sunlit day with good light. Near Kisdon Force the sedge *Carex strigosa*, quite scarce in Yorkshire, was recorded on a shaded trackside verge. Here the hybrid willow *Salix x reichardtii* was noted whilst later on Kilsdon Side SSSI a single specimen of *S. multinervis* was seen. These hybrid willows are certainly under-recorded but easily identified once the recorder is aware. The route next ran along the west of Kisdon Side SSSI. On the south side of Birkhill Wood *Cirsium heterophyllum* was seen alongside one of the few broken walls, whilst the hay meadows to the south contained *Conopodium majus*, *Filipendula ulmaria*, *Campanula rotundifolia*, *Anthoxanthum odoratum* and *Festuca ovina*. Higher up, the habitat began to change to more acid conditions, illustrating the transition described in *British Plant Communities 3 Grassland and Montane Communities*, where the calcareous grasslands of the Yorkshire Dales' Carboniferous Limestone, change to NVC **U4** *Festuca ovina-Agrostis capillaris-Galium saxatile* calcifuge grass and then to *Calluna vulgaris* heath. Here there was a small area of *Nardus stricta* and *Deschampsia flexuosa*. Further south, a bog area on the footpath had *Ranunculus omiophyllus* and *Glyceria declinata*.

Along the footpath at Scar Close above Angram, the west-facing slope holds a good area of mixed-aged *Juniperus communis* (SD893001) with both male and female plants, the latter in fruit, forming a NVC **W19** *Juniperus communis-Oxalis acetosella* community. This community is usually found over 300m, associated with many ericaceous plants, but here to the south, limestone scree supported *Helianthemum nummularium*, a plant scarce in the Dales due to grazing pressure. The descent to Angram Bottoms SSSI passed through an exceptional Dales meadow on a west facing steep slope with at least 30% herb cover, principally consisting of *Potentilla erecta* and *Succisa pratensis*. The Angram Bottoms

SSSI is dominated by *Carex rostrata* together with *Achillea ptarmica*, *Phalaris arundinacea*, *Filipendula ulmaria*, *Glyceria fluitans* and *Hydrocotyle vulgaris*. Along the road to Keld a veteran *Ulmus glabra* was noted whilst in the village *Campanula latifolia* occurred and *Sedum album* and *Sempervivum tectorum* grow on the walls.

LANDSCAPE (J.A. Newbould)

The name Keld derives from the north country word *Kelda* meaning “well or spring”. There appears to be no reference in *Domesday* to Keld or Muker, the nearest place referred to being Grinton (SE0498). An Anglican Church was founded in Muker c. 1580. The field systems associated with Keld, Muker and Gunnerside appear to be co-axial parallel fields on the hill sides probably from early 1800 enclosures with valley bottoms formed into smaller units often following the contours of the land or streams and these are probably later tithe enclosures, all demarcated by traditional drystone walls mostly in good condition. Fields with least undulation are used for traditional hay crop with aftermath grazing. Sheep and cattle graze other fields with sheep on the steep hill slopes. The area still has a number of traditional stone barns. The hill-tops are open pastures or moorland. An ancient rabbit warren was noted above Keld facing north-west at 360 m (SD896006). Most of the woody areas seen, adjacent to the River Swale or its adjoining tributaries, are NVC W9 *Fraxinus excelsior*-*Sorbus aucuparia*-*Mercurialis perennis* woodland. These woods contained many coppiced hazel, occasional rowan, elm and birch. A stream (the Skeb Skeugh) feeds a marsh, covering three fields at Angram Bottoms. This then drains south to Thwaite before joining Straw Beck and the Swale east of Muker.

The River Swale and its tributaries were in spate at the time of the meeting with evidence of recent over-topping of its banks in places. As a result, few observations were made in the peat-coloured waters, which were ochraceous in places. Three members of the party (A. Norris, D. Lindley and J.A. Newbould) arrived on Friday making observations in the Gunnerside area on 24 July as well as at Keld the following day. Records were made in sixteen 1 km squares.

BRYOPHYTES (T. Blockeel)

Bryophytes were recorded between Keld and Kisdon Force in NY90V on both sides of the river, though mainly on the south side, and in and around the lower part of Swinner Gill in NY90A. In the flood zone of the Swale there were numerous tufts and patches of blackish moss on the rocks and boulders. Not surprisingly, in view of the peat-stained water of the river, a lot of these tufts were *Racomitrium aciculare*, a calcifuge species. It was accompanied in places by the superficially similar *Schistidium rivulare*. The most significant record here, however, was *Scapania subalpina*, growing characteristically embedded in sandy detritus over rock. This is primarily a species of mountain regions, with very few Yorkshire records, and is new for Swaledale. The woodland at and near Kisdon Force was rich in species. The presence of large calcicoles such as *Neckera crispa* and *Tortella tortuosa* added to the impression of luxuriance. Two specialities of the Pennine limestone occur here, the leafy liverwort *Pedinophyllum interruptum*, found on a wet ledge by the foot of East Stonesdale, and the tiny moss *Seligeria trifaria* s. lat., on vertical faces of wet limestone. After a careful search, capsules were eventually found, allowing this population to be segregated as the small-spored *Seligeria patula*, rather than the large-spored *S. trifaria* sens. str. This is the first confirmed record of *S. patula* for Yorkshire. Also recorded on the limestone rocks were *Cololejeunea calcarea*, *Porella cordaeana*, *Tritomaria quinquedentata*, *Plagiochila britannica*, *Scapania aspera*, *Metzgeria pubescens*, *Preissia quadrata*, *Gymnostomum aeruginosum*, *Plagiobryum zieri* and *Orthothecium intricatum*. Epiphytes included *Frullania tamarisci* and *Scapania nemorella* in the cool north-facing woodland, and *Orthotrichum stramineum* on ash on the opposite bank. Swinner Gill was not so rich as Kisdon Force. There was a fine patch of *Breutelia chrysocoma* on a flushed bank, and other records included *Scapania scandica* on soil on a ledge, plentiful *Palustriella commutata* in flushes, and *Gymnostomum aeruginosum* with

abundant capsules on the wet rocks. 103 records were made for NY90V, and 47 for NY90A, with 115 species on the combined list.

LICHENS (A. Henderson)

J.G. Lambert, J.A. Newbould and H. Walker collected lichens from the areas visited, which were later determined by AH. They included *Amandinea punctata*, *Lecanora chlorotera* and *Physcia tenella* from Juniper at NY8933007 (JAN), *Hypogymnia tubulosa* and *Pseudovernia furfuracea* at NY995008 (JGL & HW), *Cladonia fimbriata*, *Lecanora chlorotera*, *Ochrolechia androgyna*, *Parmelia saxatilis* and *P. sulcata* from SD8895201062 (JAN), *Xanthoria polycarpa* on Dogwood at Thwaite SD8933760428 (JAN), and *Psilolechia lucida* on shaded stone and *Cladonia chlorophcea* on *Alnus* at SD89139982 (JAN).

SKIPWITH COMMON (VC61) 8 August 2009

INTRODUCTION (S. Priest)

Twenty members met at Skipwith Common (NGR Centrum SE645373) on one of the few sunny days this rather wet summer has offered so far. Few had visited the site in recent years and this excursion offered an opportunity to look for species recorded historically. Roy Crossley reviewed the recent history of the Common, which is no longer a YWT Reserve, but is managed as a SSSI by the Escrick Park Estate. It is said that a century ago it was possible to look from Skipwith across open heathland to Riccall with nothing to interrupt the view. However, following the cessation of livestock grazing, the Common rapidly became extensively invaded with birch and pines, and recent conservation management has been directed towards tree clearance and controlled after-grazing in order to increase the acreage of open heath. Skipwith Common has benefited in recent years as part of the Yorkshire Lowland Heath Restoration Project of Natural England.

The findings of the day were shared over tea by 18 members, representing 14 Affiliated Societies, at the Greyhound pub in Riccall. Highlights were 18 species of butterfly, a number of flowering *Gentiana pneumonanthe* and a list of 38 bird species. A venerable *Quercus robur* of > 4 m circumference had been noted along the northern boundary of the Common. It was disappointing that the Skipwith speciality *Pilularia globulifera* was no longer to be found and it was recommended that the pond in which it used to occur should be cleared of rotting vegetation to restore an appropriate habitat. Thanks were expressed to the Estate for allowing the Excursion to take place and it was agreed that it would be useful to make a return visit within three to five years to monitor the effect of reduction in grazing and changes in drainage.

VERTEBRATES (A. Norris)

The report of the meeting held on 17 July 1993 states that vertebrates were in little evidence. Similarly on this occasion vertebrate records proved to be very illusive. The only mammals recorded were Rabbit, Grey Squirrel and evidence of Moles (Mole hills) and Deer tracks. The only other mammal record was made by David Lindley who reported a dead Brown Hare on the main road close to the turn off at Riccall (SE6237).

Common Frog, Common Toad, Smooth Newt and Great Crested Newt were all recorded in SE6436; three Common Lizards were noted by the side of the track at SE6501137047 and a single one was seen in SE6537. One member reported that he had checked a large number of corrugated sheets laid out as traps for snakes but had found no evidence of their occurrence.

CONCHOLOGY (A. Norris)

Three members of the section visited seven 1 km squares recording a total of 31 species and accumulating 66 records for the recording scheme. The village pond in Skipwith

produced large numbers of the alien freshwater snail *Physella acuta*, probably introduced with plants and a second introduced species *Boettgerilla pallens* occurred in numbers on Riccall Common (SE6436). The very acid conditions prevailing over most of the area made it difficult to locate very many rich pockets of species. However, the remains of the wartime buildings, the roadside verges and the village all added to the total number of species found. Perhaps the most notable finds were *Limacus flavus* and *Candidula intersecta*, both located close to the meeting point and certainly introductions into the common by man. The calcifuge *Zonitoides excavatus* occurred in small numbers and was recorded from under rotting logs in SE6436 and SE6437. We also collected ten specimens of the slug *Limax maximus* for a DNA study project into the genus *Limax* being undertaken by a group of scientists in Switzerland.

ENTOMOLOGY (A. Grayson)

Most time was spent in SE6637 (especially within SE660377), where many heathland insects were active in the pleasantly warm and calm weather conditions. The dragonflies *Sympetrum danae* and *S. sanguineum* were abundant in SE6637, together with smaller numbers of *Aeshna cyanea*, *A. grandis*, *Libellula quadrimaculata* and the damselfly *Ischnura elegans*. From elsewhere, John Blackburn reported two other dragonflies, *Anax imperator* and *Sympetrum striolatum*.

Many of the hoverflies present were rather ubiquitous species. The only somewhat local species were *Chalcosyrphus nemorum* which was found by the writer on a rotting *Betula* which had so far escaped clearance from the Common, and the small marshland hoverfly *Neosacia tenur* which was recorded by Roy Crossley. The very large hoverfly *Sericomyia silentis* is not uncommon in Yorkshire, but it was present in unusual abundance during the visit to Skipwith Common.

Blood-sucking Diptera were not much in evidence except in the vicinity of the heathland ponds where the mosquito *Aedes punctor* was fairly numerous. Only a few *Haematopota pluvialis* were present, and likewise, empidooids were scarce. Indeed, the only empidoid found by the writer was *Dolichopus discifer*. This species was also found by Roy Crossley, who recorded the following empidooids: *Platypalpus pallidiventris*, *Empis vitripennis*, *Dolichopus discifer*, *D. vitripennis*, *Gymnopternus aerosus* and *Campsicnemus scambus* as well as the sciomyzid *Elgiva cucularia*. Other Diptera included the soldier-fly *Sargus iridatus* and the conopid *Physocephala rufipes*, both of which were found close to Sandy Lane by the writer. The most noteworthy Diptera recorded by Roy Crossley were the crane-fly *Euphylidorea meigenii* and the curious ephydrid *Ochthera mantis*.

Roy Crossley recorded four species of Hemiptera; *Gastrodes grossipes* from *Pinus sylvestris*, *Elasmostethus interstictus*, *Kleidocerys resedae* and *Picromerus bidens*. Hymenoptera were not plentiful, but the writer recorded the spider-hunting wasps *Anoplius nigerrimus* and *Dipogon subintermedius* around the same rotting *Betula* that produced the hoverfly *Chalcosyrphus nemorum*, and elsewhere on the heathland occurred the common aculeates *Vespula germanica*, *Apis mellifera*, *Bombus lucorum*, *B. pascuorum* and *B. terrestris*, and the groundhopper *Tetrix undulata*.

The migratory day-flying Silver Y moth *Autographa gamma* was present on heathland within SE6637, together with the butterflies *Pieris brassicae* Large White, *P. napi* Green-veined White, *Lycena phlaeas* Small Copper, *Polyommatus icarus* Common Blue, *Cynthia cardui* Painted Lady, *Inachis io* Peacock and *Maniola jurtina* Meadow Brown. *Pieris napi* and *Maniola jurtina* were also present in the vicinity of King Rudding Lane Car Park (SE645373) together with *Pararge aegeria* Speckled Wood and *Lasiommata megera* Wall Brown.

ACULEATES (M. Archer)

15 aculeate bees and wasps were noted: six solitary and three social wasps, plus two solitary and four social bees. All species are common and frequently seen in Yorkshire with the exception of *Megachile versicolor* which is only occasionally seen.

BOTANY (D.R. Grant)

On entering the Common botanists were appalled by the overgrazing of the herbage, the grass being extremely short and full of nettles and even all the brambles had been eaten by the Highland Cattle. Members walked on to the pond where the Pillwort grows. This was overgrown with Reedmace, shaded by overhanging trees and the water was full of rotting Alder tree leaves. The Pillwort has probably been killed. The area of the old concrete runways was then examined. Again vegetation had been destroyed, including six species of bramble and many other plants, leaving only Stonecrops and the Piri Piri Burr plant.

After lunch the board walks area was examined. In damp places *Hydrocotyle vulgaris*, *Dryopteris spinulosa* and *Anagallis tenella* were found. After careful searching several plants of *Gentiana pneumonanthe* were found in one of the open areas at SE65323723. At the edge of one ride a small colony of *Calamagrostis epigejos* and a few shrubs of *Frangula alnus* were noted. The rare bramble *Rubus bertramii* had been destroyed, this being only the second site for it in the County. The dykes had only *Potamogeton polygonifolius* and *P. natans* as the water is highly acidic. It is hoped that the new management scheme will result in many species returning to the common in future years.

LICHENS (A. Henderson)

In 1970 Coppins and Shimwell studied the effects of heath burning on lichen succession on Skipwith Common and detected four phases: pioneer, building, mature and degenerating. With the lack of any regular rotational burning of recent years, the lichen flora is now mainly in the latter two stages, with a decline in the *Cladonietum* of a decade or more ago, most noticeable perhaps in *Cladonia ramulosa*, *C. subulata*, *C. furcata* and *C. crispata* in the runway bays to the north-west.

An even stronger decline is evident on the comparatively open stretch of old runway north of the YWT car park (SE645373) where, until the mid-1980s the runway borders were colonised by a rich *Cladonietum* accompanied by *Peltigera rufescens*, *P. praetextata* and *P. hymenina*. The wide expanse of inner runway had numerous crustose species, including a notable even mixture of the normal bright yellow form of *Candelariella vitellina* and its uncommon citrine-green chemotype forma *flavovirella*. There were also extensive stretches of the snow-white, powdery-sorediate and timely fruticose *Stereocaulon pileatum*, mingled among a gelatinous corpus of *Collema tenax*, *Leptogium turgidum* and *L. biatorinum*.

Since the mid-1980s a lowering of humidity and the invasion of competing mosses and higher vegetation have brought about the reduction of this once rich lichen community to some scattered, still persistent *Peltigera* and a few straggling common species, e.g. *Lecanora muralis*. Such a change is, of course, to be expected as the system moves towards a birch-oak woodland climax. On the Skipwith runways in particular, the lichens can be said to have fulfilled their initial pioneering-building role.

In the more advanced woodland towards Skipwith village, in contrast to the rather sparse corticolous lichen flora generally encountered over the Common, two somewhat decumbent mature oaks held the richest assemblage seen during the day: *Amandinea punctata*, *Arthonia punctiformis*, *Bacidia adasta*, *Candelariella reflexa*, *Flavoparmelia caperata*, *Hypogymnia physodes*, *H. tubulosa*, *Hypotrachyna revoluta*, *Lecanora chlorotera*, *L. expallens*, *Lecidella elaeochroma*, *Lepraria incana*, *Parmelia saxatilis*, *P. sulcata*, *Parmotrema perlata*, *Phaeophyscia orbicularis*, *Physcia adscendens*, *P. aipolia*, *P. tenella*, *Punctelia subrudecta*, *Ramalina farinacea*, *Usnea subfloridana*, *Xanthoria candelaria*, *X. parietina* and *X. polycarpa*. The day's total was 71 species.

OBITUARY

KENNETH GEOFFREY PAYNE (1917-2010)

Kenneth Payne, doyen of Yorkshire entomologists, and, jointly with his wife Joyce, an Honorary Life Member of the Yorkshire Naturalists' Union, died on 26 January 2010 at the age of 92. Kenneth was born at Cheam, Surrey on 21 March 1917, and was initially taught at home by his mother, but later he attended Caterham School, from whence he went, at the age of 17, to the Royal College of Science, part of Imperial College, at the University of London. After graduating, he moved to York to take up a post as physicist at Cooke, Troughton and Simms, later to become Vickers Instruments, and from which he retired at the age of 65.

In the finest tradition of British natural history, Kenneth was an all-rounder, bird watching and taking a keen interest in general entomology and microscopic fungi, as well as amassing a large herbarium (which was eventually donated to Leeds City Museum). His interests were shared by Joyce, whom he had first met on a YNU field meeting at Allerthorpe Common, and theirs was a joint life-long enthusiasm for natural history.

For a time in his early life, Kenneth was secretary of the York and District Field Naturalists' Society of happy memory, and also of the YNU. In addition, he 'took the minutes' at the formative meetings leading up to the acquisition of Askham Bog as the first nature reserve in Yorkshire and the founding of what is now the Yorkshire Wildlife Trust.

Kenneth's chief interest, however, always remained with insects, and he was YNU Recorder for Diptera for several years from the mid-1950s, following the death of the legendary Chris Cheetham. His ready willingness to help newcomers to the study is well attested by those who had the good fortune to come across this quiet, unassuming man. I recall with affection our first meeting on a warm May day nearly 50 years ago when the Entomological Section held a field meeting at Birkham Wood near Knaresborough. I was a newcomer to dipterology with an interest in hover-flies; within the following week Kenneth sent me a hand-written list of all Yorkshire hover-flies, complete with columns indicating from which vice-county there were omissions in the records. I still have the list. Others attest to similar acts of generosity and encouragement.

In his later years at YNU field meetings, when mobility restricted him, he would sit in the car or walk a few yards, supported on his walking stick to chat with old friends. On those occasions Joyce would go off and bring him back specimens of microfungi or galls. Kenneth would then spend a happy time at home working at his microscope on the material. Some years ago his major collection of flies was donated to Liverpool Museum, and further boxes of insect specimens, mostly Diptera but also some Hemiptera, discovered after his death, have been passed to Leeds City Museum, where earlier, smaller collections had been deposited.

An independently-minded gentleman, of great kindness and with a wide practical knowledge of the world of nature that he loved so much, Kenneth Payne will be greatly missed by his many friends in the YNU and beyond. Our condolences are extended to Joyce, John, Cathy and Barry Caudwell. The funeral was held on 2 February at All Saints' Church, Cawood. It was well attended by local villagers and YNU members, even though Kenneth had outlived many of his contemporaries. I have been greatly assisted in the compilation of this note by the Oration given at the funeral by his son John.

Roy Crossley

COLEOPTERA REPORT FOR 2002-2009

R.J. MARSH

11 Crusader Drive, Sprotbrough, Doncaster DN5 7RX

This report deals with the Coleoptera excluding Aleocharinae and follows that of Marsh (2002), and the records that follow formed the main points of interest of annual reports presented to the YNU Entomological Section at its indoor meetings held during 2002-2009.

The Coleoptera records of the YNU are now held on a Recorder 6 electronic database and the latest national checklist is being used for nomenclature (Duff 2008). This replaces the earlier checklist (Kloet & Hincks 1977). I have continued to use the vice-county system as a convenient means of area recording and, as is usual in this type of report, sites are listed in VC order. 'A Yorkshire Coleoptera Checklist' covering VCs 61 to 65, and based on the records on the YNU database, has been placed on the YNU website at www.ynu.org.uk. 'A County Atlas of Coleoptera' is also being undertaken, the first part of which, covering the Carabidae, is now posted on the same website.

In the following species accounts, # = a new county record and * = a new vice-county record and a convention of preceding site names with the respective vice-county and followed by OS grid reference has been adopted. The initials of collector/determiner follow the date of the record. National Status (see Hyman & Parsons 1992, 1994 or the checklist in Recorder 6) is included where appropriate as follows:

RDB1 – endangered – taxa in danger of extinction and whose survival is unlikely if causal factors continue operating.

RDB2 – vulnerable – taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating.

RDB3 – rare – taxa with small populations that are not at present endangered or vulnerable, but are at risk.

RDBK – species assigned Red Data Book category but with biological information insufficiently known.

Notable A – species which do not fall within the RDB categories but are thought to occur in 30 or fewer 10 km squares of the Ordnance Survey National Grid, or for less well-recorded groups, within seven or fewer vice-counties.

Notable B – species which do not fall within the RDB categories but are thought to occur in between 31 and 100 10 km squares of the Ordnance Survey National Grid.

Notable – species which are estimated to occur within the range of 16 to 100 10 km squares of the Ordnance Survey National Grid.

The following initials appear in the list that follows: KNAA = K.N.A.Alexander; FB-B = F.Balfour-Browne; RGB = R.G.Booth; JB = J.Botting; HHC = H.H.Corbett; MLC = M.L.Cox; MLD = M.L.Denton; WRD = W.R.Dolling; ABD = A.B.Drane; WAE = W.A.Ely; ME = M.Eyre; TE = T.Ezard; JF = J.Flanagan; JHF = J.H.Flint; WWF = W.W.Fowler; AG = A.Godfrey; MH = M.Hammond; WCH = W.C.Hey; PH = P.Holmes; CJ = C.Johnson; PK = P.Kendall; FEK = F.E.Kenington; DAL = D.A.Lott; MLL = M.L.Luff; IM = I.MacDonald; RJM = R.J.Marsh; HM = H.Mendel; RM = R.Merritt; SLM = S.L.Mosley; PS = P.Skidmore; JS = J.Small; EJS = E.J.Smith; DS = D.Stenhouse; PT = P.Tannett and MLT = M.L.Thompson.

Thanks are due to C. Johnson and Dr M.L. Luff for their identification of certain specimens, and to M.L.Denton for reading an earlier draft of this paper and for researching details of the *Pogonocherus hispidus* record. The thanks of the Entomological Section of

the Yorkshire Naturalists' Union are due to individuals, landowners and organisations that have permitted access to their properties in order for fieldwork to be carried out.

CARABIDAE

Bembidion quadripustulatum Audinet-Serville – (#63) Templeborough (SK4192) 22/7/2006 (RJM teste MLL). A single specimen sieved from ground litter in beds of *Typha latifolia* was the first authenticated Yorkshire record. Records from the Potteric Carr area around SE6000 shown in the BRC Atlas (Luff 1998) are probably erroneous and refer to supposed captures in the 1960s – voucher specimens have not been traced and the supposed collector (PS) denied knowledge of the species' occurrence there.

Acupalpus exiguus (Dejean) – Notable B – (#63) Sykehouse (SE6316) 2/6/2005 (RJM teste MLL), a single specimen from the base of a hay bale, and found again in large numbers at another Sykehouse site (SE6417), in *Juncus* litter in marshy ground in 2008 and 2009. These are the first authenticated Yorkshire specimens. Unsubstantiated records from pitfall trapping on Hatfield Moor were believed to be misidentifications in the absence of vouchers. Old YNU records from Thorne Moor (SE71) 6/1914 (HHC) and Skipwith Common (SE63) 6/1923 (MLT) are considered doubtful, again in the absence of vouchers.

HYDROPHILIDAE

Chaetarthria seminulum (Herbst)/ *Chaetarthria simillima* Vorst & Cuppen – *C. simillima* was described as new in 2003 from mainland Europe. Examples of this new species were found in Britain first in museum collections and then more recently in the field (Levey 2005). In 2009 there were 43 records of *C. seminulum* on the YNU database, most of which are now in doubt, unless voucher specimens can be examined, owing to the widespread occurrence of *simillima* in material so far examined by Levey (2005). The species are best separated on male genitalia. Undoubted *C. simillima* have been located at (61) Skipwith Common (SE6637) 2006 (MH det. RM), one male; (61) North Cave Wetlands (SE8833) 1/7/2008 (RJM det. RM), several males in wet moss in seepages. Undoubted *C. seminulum* have been identified from (61) North Cave Wetlands (SE8833) 1/7/2008 (RJM det. RM), males by water's edge of flooded gravel pit; (63) Potteric Carr (SE5800) 29/4/2003 (RJM det. RM), several males in pitfall traps by pond; (63) Dunsville Gravel Pits (SE6508) 29/9/2008 (RJM det. RM), a male in wet sand at edge of flooded gravel pit; (64) Upper Dunsforth Carrs (SE4462) 22/9/2005 (RJM), in wet ground litter in carr woodland. Further research is required to determine precise habitat preferences of both species.

HYDRAENIDAE

Limnebius aluta (Bedel) – RDB3 – (61) Stamford Bridge (TA75) undated (WWF); (*62) Strensall Common (SE6559) 2/5/2008 (RM), netted from pond with *Sphagnum*, apparently the first VC62 record for this rare species. There are five records on the YNU database: old records for (64) Askham Bog in the 1880s (WWF and WCH) and (64) Chaloner Whin (once part of the Askham Bog site) (SE5848) in 1906 (FB-B).

Ochthebius viridis Peyron – Notable B – (#61) Sunk Island (TA3118) 25/9/2004 (MH), in pond.

PTILIIDAE

Nossidium pilosellum (Marsham) – (61) Burton Constable (TA1737) 17/7/2002 (WRD), in bracket fungus on tree stump. Only the second county record.

Ptenidium formicetorum Kraatz – (#63) Fenwick Cemetery (SE5815) 20/9/2008 (RJM det. CJ), by sweeping around shaded compost heap.

CLAMBIDAE

Clambus simsoni Blackburn – (#63) Nostell Priory (SE4017) 4/8/2003 (MLD); (63) Wickersley Wood (SK4891) 27/5/2005 (WAE det. CJ); (63) Upper Fell Greave Wood (SE1420) 16/8/2006 (MLD); (63) Crookesmoor (SK3387) 4/9/2009 (EJS det. RJM).

LEIODIDAE

Leiodes cinnamomea (Panzer) – Notable – (*63) North Dean Wood (SE0921) 1984 (MLD); this record does not seem to have been published previously; (63) Pot Ridings Wood (SE5200) 21/10/2007 (AG det. RJM), in pitfall traps. There are early 20th century records from Hull, York, and Raincliffe Woods via JHF. This very scarcely recorded species occurs on lime-rich soils and is associated with truffles (*Tuber* species) (Cooter 1996).

Colon latum Kraatz – (*63) Pot Ridings (SE5200) 12/8/2002 (MLD), in pitfall traps. A very rarely reported leiodid of deciduous woodland, and the third record for Yorkshire on the YNU database.

Colon serripes (Sahlberg, C.R.) – (*63) Potteric Carr (SE5900) 20/5/2002 (RJM), one male in pitfall traps at heavily vegetated pond margin. There are only two other early 20th century records for the county.

SCYDMAENIDAE

Euconnus duboisi Méquignon – (#61) North Cave Wetlands (SE8833) 21/8/2007 (WRD det. RJM), sieved from compost heap; (*63) Green Wood Denby Dale (SE2108) 4/1/2009 (JF det. RJM). Nationally a very scarce scydmaenid, the distribution of which may be expanding.

Kissister minimus (Laporte) – (#63) Thorne Moor (SE71) 21/9/2009 (AG det. MLD), in mire pitfalls.

STAPHYLINIDAE

Fagiezia impressa (Panzer) – (64) Cayton Gill (SE2862) 5/5/2005 (MLD), reported from the Ripley Park YNU survey. This rare pselaphid was last reported reliably from Askham Bog in 1947 by E.J. Pierce.

Sepedophilus constans (Fowler) – Notable – (*62) Beningbrough Park (SE5157) 4/9/1999 (ABD), in ground litter.

Tachinus elongatus Gyllenhal – (64) Upper Dunsforth Carrs (SE4463) 31/5/2005 (RJM), in decaying leaf mould by a drainage channel. There are two main centres of population for this distinctive upland staphylinid, one in the North York Moors and the other in the high Pennines. It was surprising therefore to find a specimen at this site.

Bledius atricapillus (Germar) – (*63) Hurst Plantation (SK6398) 7/10/2005 (DS), specimens in a sand pit, the first VC63 record I am able to trace of this (usually) coastal species. We have on the YNU database records for “*atricapillus*” which are coastal and have been taken in seepages on clay cliffs by the seashore, but these may be referable to *praetermissus* Williams. The nomenclature and true identity surrounding this species pair is presently uncertain (DAL pers. comm. to RJM).

Stenus bifoveolatus Gyllenhal – (*65) Foxglove Covert (SE1697) 13/7/2002 (RJM), in ground litter by lake.

Medon apicalis (Kraatz) – Notable – (#63) Millington Wood (SE8353) 10/5/2009 (RJM), a single female sieved from a pile of wood chippings, and the first county record. This nationally scarce staphylinid is generally a south-eastern species in Britain.

Gabronthus thermarum (Aube) – (#61) Danthorpe (TA2332) 24/9/2001 (WRD), in horse dung.

Heterothops praevious Erichson – (*63) Blackmoorfoot (SE1012) 26/7/2008 (MLD), in stable refuse. There are only another four county records.

Leptacinus intermedius Donisthorpe – (*61) Hollym Carrs Reserve (TA3224) 20/7/2003 (WRD), a new vice-county record and the first county record for 40 years.

EUCNEMIDAE

Microrhagus pygmaeus (Fabricius) – RDB3 – (62) Rievaulx Terrace (SE5784) 28/6/2000 (ABD), the fourth county record for this very rare eucnemid, and the first Yorkshire record since 1975.

ELATERIDAE

Athous campyloides Newman – (*63) Sprotbrough (SE5503) 7/7/2009 (RJM det. HM), in a water butt in a suburban garden. This represents only the third county record.

Negastrius sabulicola (Bohemian) – RDB2 – (65) Langton Bridge (SE2896) 7/7/2005 (AG det. MLD), in pitfall traps in shingle on the Swale bank. This is only the second county record of this very rare elaterid (recorded from only six VCs in Britain) which was first recorded from the same site by Cooper (1945). It is likely that this species would be difficult to find by means other than pitfall trapping.

ANOBIIDAE

Trigonogenius globulus Solier – (*64) Leeds City Museum (SE3033) 8/10/2009 (JB teste RJM), specimens in a sticky trap in a museum storage area. This is a stored products introduction, rarely reported in Yorkshire with only four other county records on the database.

Anobium inexpectatum Lohse – Notable B – This species is very close to *A. punctatum* and separable on male genitalia, and so probably overlooked. Saproxylic and associated with *Hedera helix* stems. The seven county records include the following: (*61) Manor Farm (SE7766) 6/2003 (MH det. MLD); (*63) Pot Ridings (SE5200) 9/2002 (MLD); (*64) Drax (SE6627) 10/6/1997 (PK); (#65) Braithwaite Hall Estate (SE1186) 17 viii 1987 (KNA).

Dorcatoma substriata Hummel – Notable A – (*63) Fenwick Cemetery (SE5815) 23/7/2008 (RJM), beaten from *Hedera helix* on an old *Populus nigra*. This anobiid is essentially a species of old woodland pasture and old growth areas. There are only four other county records all from Rye valley sites in VC62.

KATERETIDAE

Brachypterus vestitus (Kiesenwetter) – (#63) Scabba Wood (SE5201) 18/5/2005 (RJM), a single specimen swept from ground vegetation in a woodland clearing; (63) Melton Brand (SE5203) 29/6/2008 (RJM), a single specimen shaken from *Malva sylvestris* by roadside. The food plant is considered to be *Antirrhinum majus* (see Kirk-Spriggs 1996). Both sites were on disturbed ground, a typical habitat for the food plant (Stace 1997). There are two records, both recent, for North Lincolnshire so this species may be spreading.

SILVANIDAE

Uleiota planata (Linnaeus) – Notable A – (#61) Calley Heath (SE7549) 14/4/2007 (WRD), a saproxylic species of old woodland and old growth situations. The species continued to be found at this site in 2008 and 2009 in fallen dead wood and in piles of old logs. A case is presented in recent literature for its being an importation rather than a long-established native (Alexander 2009). The species is mainly south-eastern English in distribution.

PHALACRIDAE

Olibrus corticalis (Panzer) – (*61) North Cliffe Wood YWT Reserve (SE8637) 20/7/2005 (WRD); (61) Scampston (SE8774) 20/8/2005 (WRD); (61) Calley Heath YWT Reserve (SE7549) 10/7/2007 (RJM); (#63) Crofton (SE3618) 3/7/1999 (ME). This species may have been overlooked in favour of its close and common relative *O. aeneus*. *O. corticalis* is usually reported from *Senecio* species whilst *O. aeneus* is usually recorded from *Tanacetum vulgare* and *Matricaria* species.

COCCINELLIDAE

Harmonia axyridis (Pallas) – (#63) Armthorpe (SE6204) 16/10/2006 (IM). First recorded in Britain in Essex in 2004. Since 2006 the YNU has received 46 records with the great majority being in October and November of each year. Records during these months mention aggregations of the beetle, when the species may be searching for overwintering sites.

Clitostethus arcuatus (Rossi) – (#63) Sprotbrough (SE5603) 28/9/2003 (RJM), beaten from

Hedera helix on *Fraxinus excelsior* in a suburban garden (Marsh 2005). This beetle is predatory on whitefly.

CORYLOPHIDAE

Orthoperus Stephens – This small genus of very tiny and rather difficult beetles to identify has been a problem. Recent work by Colin Johnson on the group and the appearance of a definitive reference work by Bowestead (1999) has clarified our records where specimens have been available to examine. Many of our earlier records are suspect in the absence of vouchers, and keys such as those in Joy (1932) are inadequate. The following records may be published with confidence:

Orthoperus aequalis Sharp – RDBK – (#63) Wentworth Park (SK3996) 1/5/2008 (EJS det. CJ), under peeling bark of *Populus* species. Typically a subcortical species, the insect is also associated with mouldy situations in ground litter.

Orthoperus atomus (Gyllenhal) – (#63) Stainton churchyard (SK5593) 4/10/2000 (RJM det. CJ), sieved from a compost heap. Generally in mouldy situations under bark and in litter, particularly in coniferous habitats (Bowestead 1999).

Orthoperus brunneipes (Gyllenhal) – RDB3 – All our reliable records from Yorkshire appear to be coastal: (61) Spurn (TA4016), (61) Barmston (TA1660), (61) Fraisthorpe Sands (TA1762). A 1992 record from (62) Bridestones Reserve (SE8791) would require a voucher to confirm. Generally a wetland species of shoreline detritus, reed beds and salt marshes.

Orthoperus corticalis (Redtenbacher) – (#61) Skipwith Common (SE6537) 7/9/2000 (MLD det. CJ), (*62) Strensall Common (SE6561) 31/7/2002 (WRD det. CJ), in *Polyporus betulinus*; (*63) Langsett (SK2199) 19/11/2006 (EJS det. CJ), in bracket fungus on *Salix* species; (63) Pot Ridings (SE5200) 29/5/2007 (AG det. RJM teste CJ), adults reared from fungi collected in woodland; (63) Wentworth Park (SK3996) 11/5/2008 (EJS det. CJ), under loose bark. A species generally associated with fungi in deciduous forests.

Orthoperus nigrescens Stephens – Notable B – (#61) Skipwith Common (SE6537) 1984 (RGB); (*63) Langsett (SK2199) 19/11/2006 (EJS). A species of wet deciduous woodlands.

LATRIDIIDAE

Corticarina similata (Gyllenhal) – (*64) Harewood Park (SE3044) 25/6/2005 (MLD). There are only five other county records.

CIIDAE

Cis pygmaeus (Marsham) – (*62) Beningbrough Park (SE5357) 3/8/2000 (ABD); (#64) Studley Royal Deer Park (SE2869) 1/8/2000 (ABD). Both records are from dead *Quercus* branches.

MELANDRYIDAE

Anisoxya fuscula (Illiger) – Notable A – (*62) Beningbrough Park (SE5157) 8/7/1999 (ABD), in old *Quercus* and *Crataegus* branches; (#63) Pot Ridings Wood (SE5200) 30/9/1988 (WAE). Very rare in Yorkshire with four records from these two sites.

Conopalpus testaceus (Olivier) – Notable B – (*64) Studley Royal (SE2869) 27/6/2000 (ABD), beaten from *Quercus* boughs. An insect of old oak woodland and very rarely recorded; there are only ten reliable county records.

TENEBRIONIDAE

Tribolium castaneum (Herbst) – (*65) Langton Bridge (SE2996) 1/8/2005 (RJM). I have 19 records for Yorkshire for this beetle, mainly from domestic premises in VC63, and it was therefore a surprise to sweep a specimen from vegetation on the bank of the River Swale.

Gonodera luperus (Herbst) – (63) Pot Ridings Wood (SE5200) 4/6/2002 (MLD). Only the

fourth county record of this very scarce and enigmatic species, it is recorded from calcareous woodland. The larva is assumed to be saproxylic (Alexander 2002).

PYROCHROIDAE

Pyrochroa coccinea (Linnaeus) – Notable B – (*61) Calley Heath (SE7549) 10/6/2008 (RJM), a male in flight around old stumps. A most unexpected record. This species is otherwise confined to two centres of population in Yorkshire, in the Rye Valley of VC62 and in the south of the county at sites including (63) Roche Abbey (SK5489), (63) Old Spring Wood (SK5381), and (63) Potteric Carr (SE5900).

SALPINGIDAE

Sphaeriestes reyi Abeille – (61) Calley Heath (SE7549) 7/9/2005 (RJM). The first VC61 record of this very scarce salpingid for over 50 years, and in this case found by sweeping around the site of an earlier bonfire. The species has some affinity for burnt timber as is borne out by most of our other records.

ADERIDAE

Euglenes oculatus (Paykull) – Until 1998 this species was very rare and only known with certainty from Temple Newsam (SE3632) and nearby Leventhorpe Hall (SE3630). Since 1998 the species has been found widely distributed in old parkland sites with over-mature dying or dead *Quercus* species. These sites include: (62) Beningbrough Park (SE5157) 1999 (ABD); (62) Castle Howard (SE7069) 2003 (ABD); (62) Newburgh Priory (SE5775) 2003 (ABD); (62) Beech Wood, Duncombe Park (SE5982) 22/8/2005 (AG det. MLD); (62) Castle Hill, Duncombe Park (SE5982) 11/8/2006 (AG det. MLD); (63) Owston Meadows (SE5511) 2001 (RJM); (64) Studley Royal (SE2869) 1999/2000 (ABD). This may represent a recent expansion in range of this species.

SCRAPTIIDAE

Anaspis costae (Emery) – There are 16 records on the YNU database, many of which require confirmation. Reliable records include the following: (*62) Beningbrough Park (SE5157) 8/7/1999 (ABD); (62) Castle Hill Wood NNR (SE5883) 2/6/2003 (KNAA). The species is scarce and very local in Britain (Levey, 2009).

CERAMBYCIDAE

Stictoleptura rubra (Linnaeus) – (#61) High Caythorpe (TA1170) 8/8/2004 (TE det. RJM); (*63) Thorne Moor (SE7117) 21/8/2005 (AG det. MLD). There are two records for Lincolnshire (Twinn & Harding 1999).

Agapanthia villosoviridescens (De Geer) – Reported new to the county in 2000 (Marsh 2002), and since that date there have been many reports and much expansion of the species in VCs 61 and 63, with 40 county records by the end of 2009. (*61) North Duffield Carrs (SE6936) 24/6/2006 (JS teste RJM). Many records note an association with *Heracleum sphondylium* or *Cirsium* species. The Yorkshire records were reviewed in Hancox and Marsh (2004).

Pogonocherus hispidus (Linnaeus) – (*63) Heaton Lodge Wood (SE1720) c.1860 (SLM), “I have a specimen, still in good preservation, which I took in Heaton Lodge Wood about 35 years ago” (Mosley 1891). Most of our records of this longhorn are for VCs 62 and 64. Until the researching of this report the VC63 record quoted here did not appear on the YNU database. The record is not included in Twinn and Harding (1999). Now extremely scarce in the county, with the most recent record from the mid-1980s.

MEGALOPODIDAE

Zeugophora subspinosa (Fabricius) – (*64) Stub Wood (SE5843) 1/6/1985 (WAE). I cannot find a previously published mention of this, the sole VC64 record.

CHYSOMELIDAE

Bruchus rufipes Herbst – (#63) Rotherham Masborough (SK4292) 13/8/2000 (ASL); (63) Sprotbrough (SE5503) 22/5/2001 (RJM) and 2/6/2009 (RJM), both swept from *Trifolium pratense*. These are the only records received for the county. The national distribution is generally southern England (Cox 2007).

Bruchidius villosus (Fabricius) – (*61) Allerthorpe Common (SE7647) 24/4/2004 (WRD), on *Cytisus scoparius*.

Bruchidius varius (Olivier) – (*61) Hull (TA1028) 6/6/2006 (WRD); (#63) Marr Hills (SE5105) 5/6/2004 (RJM), swept from *Trifolium pratense*. First found in Britain in 1994 (Hodge 1997) when it was found in Sussex, it was then seen in Hampshire in 1998 and Essex in 1999. It has since spread rapidly in southern England. There are now four Yorkshire records.

Oulema obscura (Stephens) – (*65) Foxglove Covert (SE1697) 13/7/2002 (WRD & RJM), by general sweeping.

Lilioceris lilii (Scopoli) – (*61) Skidby (TA0234) 2008 (PH); (#63) Hensall Garden Centre (SE5923) 22/5/2002 (PK), the first record reported to the county recorder; (*64) Brayton (SE5830) 30/7/2002 (PT). This beetle is expanding its distribution rapidly as a consequence of introductions in *Lilium* species via garden centres. It is now being reported from suburban and rural gardens, and there is a suspicion that this beetle was responsible for an attack on a colony of *Fritillaria meliagris* at a site near Doncaster in 2009.

Plagiодера versicolora (Laicharting) – (*61) Aughton Ings (SE6938) 7/7/1987 (RJM), on *Salix fragilis*; (61) Melbourne (SE7544) 23/5/2007 (FEK). The VC63 record published by Flint (1986) for Denaby Ings dated 19/6/1982 as new to the county was in error in this respect as an earlier record has been traced; (#62) Scaling Dam (NZ7413) 1980 (MLC). The Denaby Ings record should therefore be noted as the first for VC63. Very scarce on *Salix* species in wet places, especially on *S. fragilis*.

Phyllotreta diademata Foudras – (#63) Pot Ridings Wood (SE5200) 10/7/2002 (MLD); (63) Templeborough (SK4292) 17/8/2003 (MLD); (63) Thorne Moor (SE7316) 29/8/2005 (AG det. MLD); (63) Hatfield Moor (SE6904) 26/6/2006 (AG det. MLD). These are the only county records.

Epitrix pubescens (Koch, J.D.W.) – (*61) Melbourne (SE7544) 23/5/2007 (WRD); (*64) Upper Dunsforth Carrs (SE4463) 30/5/2005 (RM) and 28/6/2005 (RJM), both on *Solanum* species. Until 2005 there were only four post-1980 records, all from VC63. The species appears to be spreading north and west.

APIONIDAE

Exapion fuscirostre (Fabricius) – (*61) Calley Heath (SE7549) 26/4/2008 (WRD), on *Cytisus scoparius*. All county records are post-1999, and the species may be expanding northwards.

Oxystoma cerdo (Gerstaecker) – Notable B – (*61) North Duffield Carrs (SE6936) 31/7/2007 (RJM); (#63) Magna, Rotherham (SK4091) 2/7/2006 (WRD); (*64) Askham Bog (SK5747) 4/7/2008 (PK). Formerly a species of the northern half of the British Isles (Morris 1990) and now including southern vice-counties, the species was first reported to the YNU recorder in 2006. Now, in 2009, the species is found to be abundant and widely distributed in VC63 and southern VC61, and spreading rapidly. In the past this species may possibly have been overlooked in favour of *O. subulatum*, although the food plants differ. Its designation of Notable B may require reassessment.

CURCULIONIDAE

Curculio glandium Marsham – (*62) Strensall Common (SE6559) 31/5/2006 (PK), on *Quercus* species.

Gymnetron melanarium (Germar) – Notable B – (#61) Calley Heath (SE7549) 31/5/2006 (WRD). Associated with *Veronica* species, there is a record for VC62 (Hyman & Parsons 1992) the details of which I have not been able to trace.

Ceutorhynchus constrictus (Marsham) – Notable B – (*61) Skeffling (TA3720) 26/7/2003 (FEK); (*62) Rievaulx Terrace (SE5784) 2/6/2000 (ABD). Associated with *Alliaria petiolata*, and rarely reported from Yorkshire.

Orcheses pilosus (Fabricius) – Since 1999 there have been several records of this species, including (*61) North Cliffe Wood (SE8637) 20/7/2005 (WRD); (62) Beningbrough Park (SE5157) 8/7/1999 (ABD), beaten from *Quercus*, the first county record for 60 years; (62) Castle Howard (SE7270) 17/4/2003 (ABD), beaten from old *Quercus*; (62) Duncombe Park (SE6082) 28/6/2005 (KNAA); (63) Sykehouse (SE6417) 29/5/2008 (RJM); beaten from *Quercus*. There is an unsubstantiated and undated record from (63) Thorne Moor (SE71).

Orthochaetes setiger (Beck) – Notable B – (*64) Middleton Woods (SE1248) 24/8/2002 (PK and WRD), in woodland ground litter. This very scarcely reported weevil is ground-living in the adult stage, whilst the larvae are leaf-miners on various Asteraceae.

Polydrusus formosus (Mayer) – Notable A – (#63) Wath (SE4301) 10/6/2004 (WAE); (63) Prince of Wales (SE4422) 31/7/2007 (MLD).

Ernporicus caucasicus (Lindemann) – (*62) Castle Howard (SE7069) 18/6/2003 (ABD), beaten from *Tilia* species; (62) Beech Wood (SE5982) 5/10/2006 (KNAA), tree species not noted; (#64) Studley Royal (SE2869) 2/9/1999 (ABD), in fallen branches of *Tilia cordata*, and the first record received for the county. These are the only historical county records known to me. However, the species has been recorded from subfossil deposits of Bronze Age date at Thorne (SE6713), (Harding 1982). See also Allen (1969) and Cooter (1980) for information on this species in Britain.

Ernporicus fagi (Fabricius) – Notable A – (*64) Studley Royal (SE2869) 6/7/1999 (ABD) and 1/6/2000 (ABD), in borings in fallen boughs of *Fagus sylvatica*.

Taphrorychus bicolor (Herbst) – Notable A – (#64) Studley Royal (SE2869) 1/8/2000 (ABD), in the bark of a fallen *Fagus sylvatica*.

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A PLAUSIBLE IDENTITY FOR THE ‘HINCKELHAUGH INSECT’ OF JOHN RAY’S *HISTORIA INSECTORUM*, 1710

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The intrigue surrounding John Ray’s mysterious ‘Hinckelhaugh insect’ was discussed in detail by Grayson (2005a). The insect in question was probably encountered by Ray during 1660 (Grayson, 2005b) on a high hill in the Settle district marked on modern maps as Rye Loaf Hill (Grayson, 2005a). The insect must have been captured, retained as a specimen, and subsequently examined under a microscope by Ray. It is now possible for the writer to suggest a very plausible identification for the ‘Hinckelhaugh insect’ of *Historia Insectorum*.

Grayson (2005a) tentatively suggested that Ray’s insect could have been a very small reddish male of the Birch Sawfly *Cimbex femoratus* (Linnaeus, 1758) (Hymenoptera: Cimbicidae). Such a male would to some degree fit Ray’s Latin description on page 273 of *Historia Insectorum*, and could plausibly be expected to occur on a high hill (Grayson, 2005a). However, Ray chose to compare his insect with the Honey Bee *Apis mellifera* Linnaeus, 1758 (Hymenoptera: Apidae), and stated that it was a little shorter than *A. mellifera*. Such a comparison leaves genuine doubt that Ray’s insect could have been a male *Cimbex femoratus*; for its appearance is not particularly reminiscent of *Apis mellifera*,

nor would a specimen likely be small enough to fit Ray's description of his insect being slightly shorter than *A. mellifera*.

The writer is now very inclined to believe that Ray's 'Hinckelhaugh insect' was a male of the Common Horse Bot-fly *Gasterophilus intestinalis* (De Geer, 1776) (Diptera: Oestridae). Males of this species habitually congregate on high hills, and are superficially reminiscent of, and similar in size to, *Apis mellifera*. Furthermore, occasional specimens of male *Gasterophilus intestinalis* are entirely compatible with the 'Hinckelhaugh insect'. Readers of *Historia Insectorum* are easily distracted from the possibility that Ray's insect could have been a male *Gasterophilus intestinalis* by his description of the abdomen being marked with alternating black and red rings; however, the writer has seen photographic evidence that this abdominal coloration pattern occasionally occurs.

Ray's Latin description and notes on his 'Hinckelhaugh insect', translated into modern English in Grayson (2005a), are *italicised* below, and a comparison of their compatibility with *Gasterophilus intestinalis* males is given within square brackets.

- *Bee-shaped [compatible] mountain fly [compatible], shortish body [compatible], black thorax [compatible], abdomen marked with alternating black and red rings [compatible with occasional specimens, but abdominal ground colouration usually consists of areas of dark brown and pale brown in a variable pattern of patches or rings].*
- *It is a little shorter than the common honey-bee, with black thorax and abdomen marked with alternating black and red rings [compatible].*
- *The wings are ash-coloured and marked near the end part with a black line across [compatible].*
- *I found one on a very high hill called Hinckelhaugh near the small town of Settle in the county of Yorkshire [likely to occur in such a place and geographical area].*
- *It was a very aggressive nuisance near the top of the hill [plausible behaviour].*
- *It has no sting, but has pincers in the tail similar to those in the mouths of caterpillars [compatible with genital appendages].*

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BOOK REVIEWS

Wild Animals in Central India by A.A. Dunbar Brander. Pp. 296, with 20 black & white photographs, 3 line diagrams and 13 tables. Natraj Publishers, New Delhi. 2009. £18.95 hardback.

First published in 1923, this book on the larger Indian mammals and two reptiles, is based primarily on the diary and note book entries of the author, an 'old India hand' with 21 years experience in the Indian Forest Service. The author was also well acquainted with the published output of the Bombay Natural History Society and such authorities on Indian game as Blandford and Lydekker. Chapters include Sloth Bear, Wild Dog, Tiger distribution, size and habits, Tiger hunting and precautions when hunting, Leopards or Panthers, Gaur and Buffalo, Sambar, Swamp Deer or Barasingha, Chital and Barking Deer, Antelopes, Indian Pig and Other Jungle Animals. There is an appendix of systematic and Indian vernacular

names in five languages and an index. Though a product of the 'don't shoot till-you-see-the-whites-of-their-eyes' era, this book is not all huntin' and shootin', Dunbar Brander revealing that *for about six years I practically ceased to shoot...one can see so much more of an animal, and under such different circumstances if one is not intent on killing it.* No doubt anathema to current conservationist sensibilities, this is a fascinating, no-nonsense, dogmatic if exotic period piece. For those interested in the history of mammal studies in India and in the social history of the British 'upper crust' in the sub-continent, it is well worth collecting.

CAH

Dragonflies and Damselflies of the West by Dennis Paulson. Pp. 535. Princeton Field Guides, Princeton University Press, Oxford. 2009. £17.95, paperback.

The 'West' of the title is the western half of North America. This book, the first of a planned two volume series covering the entire continent, covers 348 species of *Odonata*. By way of comparison with Europe, Dijkstra (Field Guide to the Dragonflies of Britain and Europe, 2006) lists only 159 species for 'all the resident and migrant dragonflies and damselflies from the Arctic to the Sahara'.

The layout of this book is that to be expected in a good field guide. The introductory section covers the general natural history of *Odonates* and the principles of their classification, together with material on their conservation. It also contains notes on photographing and collecting specimens. The latter is not to be found in the book's European counterparts since in Europe the status of dragonflies is now approaching that of birds. Virtually all European species can be identified without killing and, with modern digital cameras and close focus binoculars, even without catching them. Collecting dragonflies, except for reasons of bona fide research including, obviously, classification and speciation, is generally frowned on and one would not expect the amateur naturalist to have his or her reference collection. That thinking has clearly not yet crossed the Atlantic. However, Europe has no genera that pose the problems of the American *Enallagma* and contains far less in the way of wilderness; so the difference is perhaps understandable.

As in most field guides, the dragonfly and damselfly species in this book are conventionally classified scientifically by family, genus and species. Ease of use is facilitated by coloured strips at the top of each section of text that tell you immediately what level it relates to. The species accounts contain five headings: Description, Identification, Natural History, Habitat and Flight Season, and are accompanied by a small but clear distribution maps and one or more photographs. Putting all the information on a species in one place and thus avoiding tedious pages of distribution maps and sections of illustrations is an excellent feature that makes for ease of use in the field. With so many species to be covered it, of course, comes at a cost. The photographs are small and, although many (but by no means all) are of good quality can be of limited use as identification aids. However the species descriptions are remarkably full and (an important requirement this) consistent between species, and the sections on identification are well focussed and informed and suggest that the author has observed the species in the field. Additionally the generic sections contain useful comparative tables as well as the line drawings of sex organs, prothoraxes, etc that are needed for specific identification in difficult cases.

Each dragonfly and damselfly species is given an English vernacular name as well as its scientific name. Vernacular names dominate the text and are exclusively used for the illustrations including the line drawings on genitalia. The reader would have difficulty using this guide unless she was familiar with the English names, which are of course recent inventions. While they are by no means as insular as those coined for our species by the British Dragonfly Society (BDS), these American vernaculars are equally as contrived. The names of the bluets are certainly a challenge to the memory! A familiar Yorkshire species which appears on both sides of 'The Pond', *Aeshna juncea*, has currently three contrived English names: the Common Hawker (BDS), the Sedge Hawker (Dijkstra) and the Sedge

Darner (Paulson), as well as German and Dutch vernaculars which translate into something different. It doesn't bother the insect, but it confuses me! However, contrived English names are something that entomologists will have to live with.

Overall this is a very impressive book that I am sure will remain the standard work for a long time. I have no hesitation in recommending it, and look forward to its companion volume titled, presumably, *Dragonflies and Damselflies of the East*.

JB

RECORDER'S TENTH REPORT OF THE ACULEATE HYMENOPTERA IN WATSONIAN YORKSHIRE

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Unless otherwise stated, this report is based on 2007, 2008 and 2009 records contributed by the following: K. Allison (KA), M.E. Archer (MEA), J. Bowers (JB), J.T. Burn (JTB), G. Boyd (GB), A.E. Bradley (AEB), J.D. Coldwell (JDC), M. Crawley (MC), W.R. Dolling (WRD), J.P. Flanagan (JPF), A. Godfrey (AG), A. Gomez (AG), P. Kendall (PK), A. Millard (AM), S. Saxton (SS), R.M. Smith (RMS) and D. Whiteley (DW). Of particular interest is the number of important records from urban York.

NEW SPECIES

Lasius platyptorax Seifert, Skipwith Common (SE63), SH, May 2006.

Stigmus pendulus Panzer, Fishponds Wood, York (SE55), MEA, Aug. 2008; St Nicholas Field, York (SE65), MEA, July & Aug. 2009.

Lasioglossum pauxillum (Schenck), Rossington Bridge (SK69), JTB, April 1987.

Bombus hypnorum (Linn.), Adel Dam (SE24), AM, June 2009; Anlaby Road, Hull (TA02), MC, June 2008; Cottingham (TA03), KA, April 2009; Elmfield Terrace, York (SE65), MEA, April, May & June 2009; Headingley (SE23), JB, July 2009; Goole (SE72), PK, April 2009; Horsforth (SE23), AM, May 2009; Hull University (TA03), AG, June 2007; Marlborough Road, Hull (TA02), AG, Aug. 2005, June 2006, May 2007, June 2008; Keighley (SE04), SS, May 2009; Langsett Reservoir (SK29), JPF, June 2007; Meanwood Park (SE27), AM, June 2009; Old Moor (SE40), JDC, May 2009, Otley Wetlands (SE14), AM, June 2009; Rodley NR (SE23), AM, June 2009. This species has established itself in Yorkshire very quickly.

Bombus subterraneus (Linn.), Roundhay Park (SE33), AEB, May 1922. This is the first confirmed record of this species in Yorkshire. The specimen to support this record was found in The Natural History Museum, London by P. Williams.

RE-DISCOVERED SPECIES

Andrena nitida (Müller), Hagg Wood, York (SE65), GB, 2002. The previous record was from near York, c. 1840 by R. Cook.

OTHER IMPORTANT RECORDS

Cleptes semiauratus (Linn.), Armthorpe (SE60), JTB, July & Aug. 2000; Edenthorpe Plantation (SE60), JTB, July 1994; Sandall Beat Wood (SE60), JTB, July 1991.

Pseudomalus violaceus (Scopoli), Armthorpe (SE60), JTB, Aug. 2000; Elstronwick (TA23), WRD, Sept. 2007.

Chrysura radians Harris, Barnby Dun (SE60), JTB, June 1979; Rossington Bridge (SK49), JTB, May 1987; St Nicholas Field, York (SE65), MEA, 2007.

Anoplius infuscatus (Van de Linden), Hatfield Moor (SE70), MEA, June 2007.

- A. viaticus* (Linn.), Hatfield Moor (SE71), MEA, April 2007, April 2009.
Crossocerus distinguendus (Morawitz), Blackbrook Wood (SK28), DW, 2007.
C. leucostomus (Linn.), Strensall Common (SE66), MEA, June 2008.
Stigmus solskyi Morawitz, Fishponds Wood, York, MEA, July 2008; St Nicholas Field, York (SE65), MEA, Sept. 2007.
Pemphredon morio Van der Linden, Strensall Common (SE66), MEA, July 2008.
Cerceris arenaria (Linn.), Allerthorpe Common (SE74), MEA, Aug. 2007, Bachelor Hill, York (SE55), MEA, July 2007, RMS, July 2008; Hatfield Moor (SE70), MEA, Aug. 2007, July 2008.
Philanthus triangulum (Fab.), Bachelor Hill, York (SE55), MEA, July 2007; Hatfield Moor (SE70), MEA, Aug. 2007.
Hylaeus signatus (Panzer), Cycle Track, York (SE65), MEA, July 2007; Hatfield Moor (SE70), MEA, June 2007.
Andrena ovatula (Kirby), Hatfield Moor (SE70), MEA, April 2007.
A. praecox (Scopoli), Hatfield Moor (SE70), MEA, April 2007 & 2008; Strensall Common (SE66), MEA, April 2008.
A. ruficrus Nylander, Allerthorpe Common (SE74), MEA, March, April & May 2007; Strensall Common (SE66), MEA, April 2009.
Sphecodes crassus Thomson, Cycle Track, York (SE65), MEA, May 2007; Hatfield Moor (SE70), MEA, June 2007.
Anthidium manicatum (Linn.), Clifton Backies, York (SE55), MEA, Aug. 2007; Elm Moor Lake, York (SE65), MEA, June 2007; Goole (SE72), PK, July 2009; St Nicholas Field, York (SE65), MEA, Aug. 2007.
Megachile ligniseca (Kirby), Cycle Track, York (SE65), MEA, July 2007.
Nomada fulvicornis Fab., Sugar Beet Site, York (SE55), AG, April 2007.
Melecta albifrons (Forster), Sugar Beet Site, York (SE55), MEA, April 2007.
Bombus jonellus (Kirby), Hatfield Moor (SE70), MEA, April & May 2008; Ravenscar (NZ90), RMS, Sept. 2006.
Bombus barbutellus (Kirby), Manor Farm, Eddlethorpe (SE76), MEA, June 2009.
Bombus rupestris (Fab.), Allerthorpe Common (SE74), MEA, July 2007; Hatfield Moor (SE70), MEA, Aug. 2007.

THE HOT-HOUSE SPIDER *ACHAEARANEA TEPIDARIORUM* (C.L. KOCH 1841) UNDERGROUND AT BRODSWORTH COLLIERY, SOUTH YORKSHIRE

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Considering the large number of Yorkshire naturalists who have worked underground in the coal and other mining industries, there are very few published studies of organisms from these specialist subterranean environments. It is relevant therefore to place on record the following note.

On 13 December 1963, E.F. Gilmour, Director of Doncaster Museum (1952 to 1967) received from Dr R.W. Scott, Area Medical Officer for the National Coal Board (Yorkshire Division No. 2 Area (Doncaster)), 'samples of a small spider-like insect' which was 'infesting' a localised area underground in Brodsworth Colliery, Doncaster (VC 63, SE/5207). An annotation on the reverse of the accompanying letter, initialled by Dr Scott,

said 'My guess? Spider Beetle – Ptinidae'; this was counter-annotated in Gilmour's hand 'No! Not Insecta ... 8 legs!'

Attached to the letter is a note, in the writing of T.M. Clegg (Keeper of Natural Sciences at Doncaster Museum 1963 to 1966), identifying the specimens as *Theridion tepidariorum* [= *Achaearanea tepidariorum* (C.L. Koch 1841)], the so-called 'Hot-house spider', and *Theridion denticulatum* [= *T. melanurum* Hahn 1831]. Appropriately, the specimens were collected at a site which, even in the notoriously cold December of 1963, registered a temperature of c. 80°F. Clegg's identifications were presumably based on Locket and Millidge (1953), which was available to him in the Museum library.

Bristowe (1939) noted that although *T. tepidariorum* had been found in coal mines in Douchy, France, it had not previously been recorded in British mines. First recorded in Yorkshire in 1896, William Falconer (1862–1943) knew *T. tepidariorum* from 14 Yorkshire sites between 1918 and 1922, all confined to heated greenhouses. Clifford Smith (1982) plotted Falconer's and later records in the following eight 10km squares: NZ/80, TA/08, 02, 12, SE/13, 11, 33, 94, the most recent record being from 1935. Paul Lee's (2002a) review of its British status describes it as an introduced synanthropic species typically found in buildings such as heated greenhouses, widespread in England but with few records in Wales and north of Yorkshire. The distribution map in Lee (2002a) only shows one post-1980 record for Yorkshire, namely from the Leeds grid square SE/33. It is however widespread in western and central Europe.

Reviewing the national status of *T. melanurum*, Lee (2002b) describes it as a synanthropic species constructing its webs in and around buildings, where it obtains the majority of its water requirements through its prey and so is able to withstand the arid environment of a modern centrally heated house. Smith (1982) recorded its presence in eighteen 10km squares in all Yorkshire vice-counties, these representing some of its most northerly British sites, since Lee (2002b) shows it as absent or very restricted north of Yorkshire.

Bristowe (1939) noted that the only records of spiders in British coal mines at the time were *Lessertia dentichelis* Simon 1884 at Niddry, Scotland and Watergate Colliery, Durham and *Porrhomma proserpina* Simon 1884 [= *P. convexum* (Westring 1851)] from Pelton, Durham. The Watergate Colliery specimens, collected for Bristowe by the colliery manager, were present in great abundance at a depth of 500–600ft. He reported that in places their webs festooned the walls. Similarly the *P. proserpina* colony at Pelton consisted of the webs of many spiders, connected in such a way as to suggest they existed communally.

The first author would welcome records, anecdotes or expressions of interest from anyone interested in compiling data on this apparently neglected aspect of Yorkshire's biodiversity.

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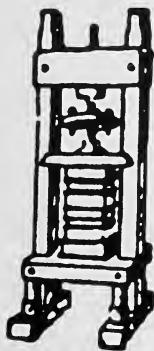
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